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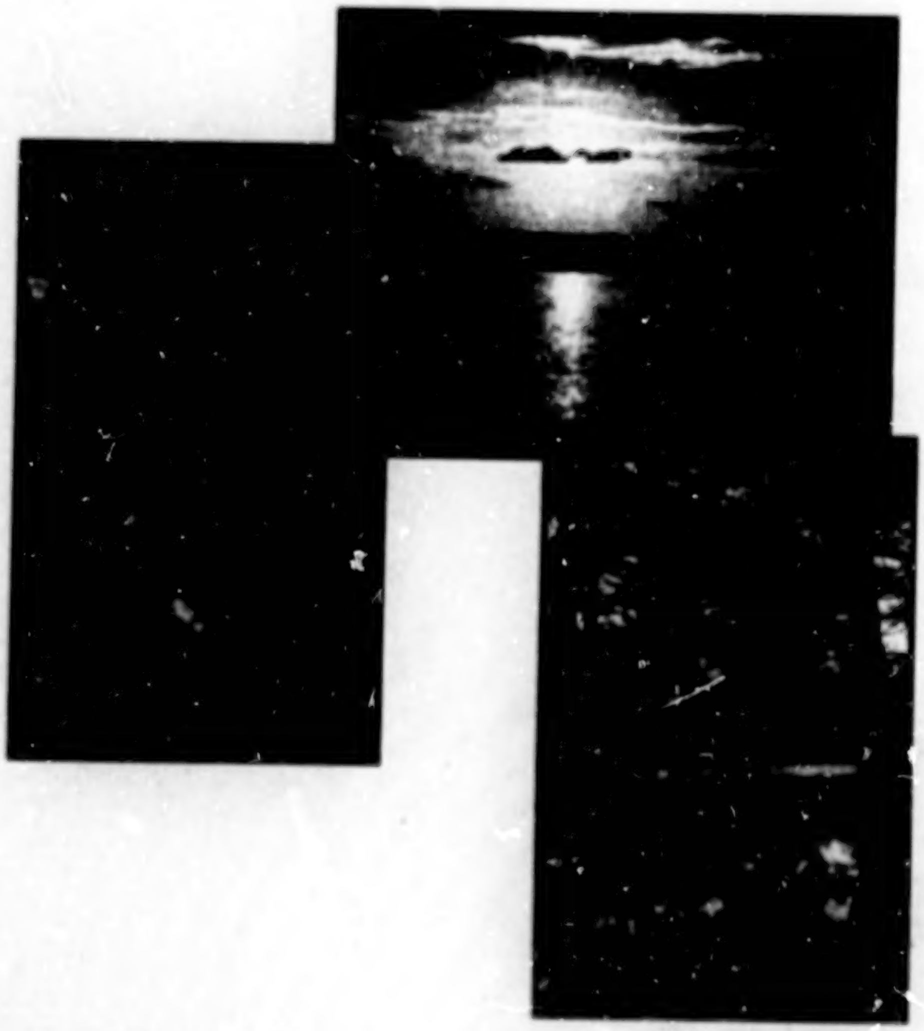
U.S. Department of the Interior
Bureau of Land Management

Eastern States
Jackson Field Office

July 2001

Arkansas and Louisiana

Draft Planning Analysis
Environmental Assessment
Disposition and Management of Public Domain Tracts



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BLM Mission

The mission of the Bureau of Land Management is to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

Photography credits-Sunrise on Marsh Lake, Iberia Parish, Louisiana, by Sharon Fakkema; Big Saline Bayou, Rapides Parish, Louisiana, by Clay Moore; and Moore's larkspur, Searcy County, Arkansas, by Doug Zollner.

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United States Department of the Interior
BUREAU OF LAND MANAGEMENT

Jackson Field Office
411 Briarwood Drive, Suite 404
Jackson, Mississippi 39206

IN REPLY REFER TO:
1600 (020)

July, 2001

Dear Reader:

Enclosed for your review and comment is the Bureau of Land Managements's Draft Planning Analysis and Environmental Assessment for Arkansas and Louisiana. This document presents alternatives for future management of Public Domain tracts of land. The analysis includes twelve tracts in Arkansas and four tracts in Louisiana.

The Bureau originally released a Proposed Planning Analysis in November, 1999. However, that document was withdrawn from consideration to allow for additional public input and collection of more information about the resources located on the tracts. This draft is being released to obtain your comments before a Proposed Planning Analysis is prepared.

The Jackson Field Office will hold a public meeting to receive comments on the Draft Planning Analysis and Environmental Assessment. The meeting will be from 7:00-9:00 p.m. on August 23, 2001 at the Civic Center Gymnasium in Marshall, Arkansas.

The Jackson Field Office also welcomes written comments. To be considered, your written comments must be received by August 31, 2001. Please include your name and complete mailing address on all written comments and send them to: Attn: PA/EA Team, Bureau of Land Management, Jackson Field Office, 411 Briarwood Drive, Suite 404, Jackson, Mississippi 39206.

Sincerely,

Bruce Dawson
Field Manager

Draft

Arkansas and Louisiana

Planning Analysis and Environmental Assessment

U.S. Department of the Interior

Bureau of Land Management

Gayle F. Gordon

STATE DIRECTOR
Eastern States

ARKANSAS AND LOUISIANA

DRAFT PLANNING ANALYSIS
AND
ENVIRONMENTAL ASSESSMENT

EA Number: ES-020-99-20

The Draft Planning Analysis presents land use decisions for future management of BLM-administered land within Arkansas and Louisiana.

FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis contained in the attached Proposed Planning Analysis and Environmental Assesament public domain tracts of land in Arkansas and Louisiana, no significant impacts to the quality of the human environment are expected to occur. An Environmental Impact Statement is not required.

State Director, Eastern States

Date

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Summary

This Planning Analysis/Environmental Assessment (PA/EA) analyzes alternatives for future management of the Bureau of Land Management (BLM)-administered lands within the states of Arkansas and Louisiana. The lands covered by this PA/EA include 12 tracts in Arkansas with a total of 575 acres, and four tracts in Louisiana with 378 acres. All of the tracts are public domain lands for which the Bureau of Land Management (BLM) has both surface land and subsurface minerals management responsibilities. The tracts are located in seven different counties in Arkansas, and four different parishes in Louisiana.

Issues

Two issues were identified during the scoping process. The first issue is **Land Ownership Adjustments** - Which tracts should be retained in public ownership? And which should BLM dispose through sale, exchange or other means? The second issue is **Special Management Areas** - Which tracts should be identified for special management to protect or enhance specific resources? And how should these resources be managed?

Alternatives

The following three alternatives were developed to resolve the identified issues.

> Under the **Custodial Management** concept, the BLM would retain the tracts, but would not pro-actively manage them. There would be no actions taken to manage habitats or other resources. When presented to BLM, applications for use would be evaluated on a case-by-case basis. Because this alternative would essentially be a continuation of the current management approach, it is also referred to as the **No Action** alternative.
>
> With the **Disposal** alternative BLM would pursue transferring the tracts out of federal ownership through various means including sale, exchange or conveyance under the Recreation and Public Purposes Act. In a sale or exchange, priority would be given to transferring the tracts to adjacent land owners. Disposal of tracts with high resource values would be allowed, but only with restrictive easements to protect the resources
>
> In the **Partnership** concept, resource management objectives are developed for each tract. These objectives include the desired conditions, such as type of habitat and recreational opportunity. BLM would actively seek partners, and with their cooperation, develop site- specific implementation plans to identify needed management actions. Transfer to other federal agencies, or conveyance under the Recreation and Public Purposes Act would be allowed, but only for uses primarily directed to attaining the management objectives.

Disposal is proposed for three of the 12 tracts in Arkansas. **Partnership** is proposed for the remaining nine Arkansas tracts, and the all four of the tracts in Louisiana.

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Chapter 1
Introduction

Purpose and Need

This Planning Analysis/Environmental Assessment (PA/EA) will provide guidance for management of the Bureau of Land Management (BLM)-administered *public domain tracts* of land within Arkansas and Louisiana. *Public domain* lands are public lands which were originally (that is upon the admittance of a state to the United States) owned by the federal government and have since that time remained in continuous federal ownership, and includes both the surface land and the subsurface minerals.

When approved, this Planning Analysis will provide the land-use planning decisions required by the Federal Land Policy and Management Act of 1976 (FLPMA). The decisions will remain in effect until changed by a new land-use plan. The Environmental Assessment will document the consideration of impacts on the environment, as required by the National Environmental Policy Act (NEPA).

The BLM has minerals management responsibilities that will not be addressed in this document. The responsibilities that will not be covered are management of federally owned minerals that lie beneath lands managed by other federal agencies, and management of *split-estate minerals*. These *split-estate minerals* are mineral rights owned by the federal government, while the surface of the land is owned by a private individual, or a state or local government. The BLM has previously prepared several PA/EAs for oil and gas leasing of specific tracts in Arkansas and Louisiana. The BLM has also prepared NEPA documents for site-specific actions, including EAs before approval of oil and gas well sites.

Background

The Jackson Field Office of the Bureau of Land Management (BLM) began this planning effort in 1997, and a Proposed PA/EA was released in November of 1999. In response to public concerns, however, the BLM withdrew that PA/EA to collect additional resource information and public input, before moving forward. Beginning December 28, 1999, the planning process was reopened to public comments through February 29, 2000. As part of the comment period, a public meeting to receive comments was held in Marshall, Arkansas, on February 24, 2000. After the public comment period, the BLM also collected additional resource information, including contracted surveys of the tracts for cultural resources and vegetation.

This document contains a broader range of alternatives than the Proposed PA/EA released in 1999, and this document is being released as a *Draft* PA/EA. This means that it will be open to public comment for 30 days, and BLM will not issue a formal Proposed PA/EA until after the public comments are considered.

Description of the Planning Area

It is the intent of this planning analysis to make decisions on all BLM-administered public domain tracts in Arkansas and Louisiana. There are approximately 575 acres of surface tracts in Arkansas and approximately 378 acres in Louisiana which have been identified and will be addressed in this document. These lands are located in seven counties in Arkansas and four parishes in Louisiana (Appendix A).

In addition, there are lands in both states for which the title is unresolved. These lands are referred to as *lands of uncertain title* (Appendix A), and may be addressed on a case-by-case basis under the provisions of the Color-of-Title Act.

Planning Issues

Planning issues are identified to focus on specific questions about how land and resources should be managed. These issues will be resolved by the land-use decisions that will be made when the PA/EA is approved. For this planning process, two planning issues were identified.

Land Ownership Adjustments

All of the BLM-administered public domain tracts in Arkansas and Louisiana are small and isolated, and, therefore, may be considered suitable for disposal. On the other hand, these tracts may have resources of value that should be retained in public ownership and managed by BLM or other agencies. The Draft PA/EA presents alternatives with different answers to the questions: What tracts should BLM retain in public ownership? And what tracts should BLM dispose through sale, exchange, or other means?

Special Management Areas

The BLM-administered tracts may have valuable resources that should be managed or protected. These resources would include sites eligible for listing on the National Register of Historic Places, endangered or threatened species, rare habitats, minerals, or potential for recreational use. We have collected information in an attempt to identify valuable resources and management opportunities. The Draft PA/EA presents alternative answers to the question: What tracts should be identified for special management to protect or enhance specific resources? And how should the resources be managed?

Planning Criteria

Planning criteria are rules for guiding the planning process. These rules include all applicable federal laws, regulations, executive orders, and policies. In addition, planning criteria may be specifically developed for a land-use plan.

Laws and executive orders defining BLM's responsibilities when preparing land-use plans analyzing environmental impacts are:

The Clean Air Act, as amended, 42 U.S.C. 7401 et seq.
Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701 et seq.
National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470
Archaeological Resources Protection Act of 1979, 16 U.S.C. 470 aa, et seq.
Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. 1201 et seq.
Executive Order 11988, as amended, Floodplain Management, 5/24/77
American Indian Religious Freedom Act of 1978, 42 U.S.C. 1996
Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 et seq.
Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 et seq.
Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. 9615
Safe Drinking Water Act, as amended, 42 U.S.C. 300f et seq.
Safe Drinking Water Act Amendments of 1996
Clean Water Act of 1977, 33 U.S.C. 1251 et seq.
Clean Water Act of 1987
Executive Order 11990, Protection of Wetlands, 5/24/77
Wild and Scenic Rivers Act, as amended, 16 U.S.C. 1271
Wilderness Act of 1964, 16 U.S.C. 1131 et seq.
Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661-664
Coastal Zone Management Act, 16 U.S.C. 1451-1464
Coastal Barrier Resources Act of 1982, 16 U.S.C. 3501-3509
National Environmental Policy Act of 1969, as amended, 42 U.S.C. 44321 et seq.
Lacy Act, as amended
Federal Noxious Weed Act of 1974, as amended
Executive Order 13112, Invasive Species, 2/3/99
Executive Order 12898, Federal Actions to address Environmental Justice in Minority Populations and Low-Income Populations, 2/11/94
Executive Order 12088, Federal Compliance with Pollution Control Standards (Amended by Executive Order 12580 Superfund Implementation), 10/13/78, 2/23/87
Executive Order 12372, Intergovernmental Review of Federal Programs, 7/14/82

Document Format

This document is organized by chapters, with supporting documentation arranged in appendices. Chapter 1 lays out the background and introductory material. Chapter 2 is a discussion of the alternatives. Chapter 3 describes the affected environment. Chapter 4 discusses the impacts of each alternative, including the preferred alternative on each tract. Chapter 5 lists the persons, organizations and agencies contacted and/or who had input into this document, and the preparers of this document. A references cited section is also included in Chapter 5. A Glossary is included after Chapter 5. The appendices are the following:

Appendix A - Lands
Appendix B - Minerals
Appendix C - Recreation and Visual
Appendix D - Soils

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Chapter 2
Alternatives

Introduction

This chapter presents alternatives, including a preferred alternative, for each tract. The alternatives were developed by an interdisciplinary team, based on the issues and planning criteria discussed in Chapter 1. The preferred alternative is not a final decision. It is an indication of the direction BLM is leaning, before having the benefit public comment specific to the preferred alternative. This chapter also includes a list of standard management guidelines which will apply regardless of which alternative is selected.

The Alternatives

Three alternatives' concepts were developed, and are described below. A more detailed tract-by-tract presentation of the alternatives is presented later in this chapter.

Under the **Custodial Management** concept, the BLM would retain the tracts, but would not pro-actively manage them. There would be no actions taken to manage habitats or other resources. When presented to BLM, applications for use would be evaluated on a case-by-case basis. Because this alternative would essentially be a continuation of the current management approach, it is also referred to as the **No Action** alternative.

With the **Disposal** alternative BLM would pursue transferring the tracts out of Federal ownership through various means including sale, exchange or conveyance under the Recreation and Public Purposes Act. In a sale or exchange, priority would be given to transferring the tracts to adjacent land owners. Disposal of tracts with high resource values would be allowed, but only with restrictive easements to protect the resources

In the **Partnership** concept, resource management objectives are developed for each tract. These objectives include the desired conditions, such as type of habitat and recreational opportunity. BLM would actively seek partners, and with their cooperation, develop site-specific implementation plans to identify needed management actions. Transfer to other Federal agencies, or conveyance under the Recreation and Public Purposes Act would be allowed, but only for uses primarily directed to attaining the management objectives.

An Alternative Considered But Not Analyzed in Detail

Acquisition of land adjacent to public domain tracts was suggested during the initial scoping process for preparation of the plan. The primary means of acquisition would be either through the Land and Water Conservation Fund (LWCF) or through land exchanges. In 1999 four BLM projects (three in Arkansas and one in Louisiana) were proposed for LWCF acquisition. None of the proposals, however, was approved. Any effort to accomplish acquisition through land exchanges would be limited by the small land base available. For these reasons we did not develop a detailed acquisition alternative. Note, however, that any future opportunities for acquisition would be considered and would be evaluated by the criteria presented in Appendix A.

Standard Management Common to All Alternatives

The following list of standard management guidelines will apply regardless of which alternative is selected. It is a combination of existing policies and management practices, and includes determinations made during the development of planning criteria.

1. All management actions will include evaluation of environmental impacts in the National Environmental Policy Act (NEPA) compliance process.

2. All management actions will comply with the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470) which provides protection for significant cultural resources. An appropriate level of inventory will be conducted for all actions with a potential to affect these resources. Actions may require consultation with the State Historic Preservation Officer and/or the Advisory Council on Historic Preservation (36 CFR 800).

3. No Native American religious sites, ceremonial sites or treaty rights areas were identified during this planning process. Additional consultation with federally recognized tribes will take place on a case-by-case basis.

4. BLM will avoid jeopardizing the continued existence of any federally listed, state-listed, or proposed species, will actively promote species recovery, and will work to improve the status of candidate and sensitive species. If a federally listed species would be affected by a proposed management action, there will be a consultation with the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act of 1973, as amended. If a proposed management action would impact a state-listed species, there will be a conference with the appropriate state game and fish agency.

5. Management actions will be conducted in a manner which conforms to the objectives of the State Air Quality Implementation Plan.

6. Management actions will be conducted in a manner conforming to the water quality management objectives which have been developed by the states as required by the 1987 Water Quality Act Amendments to the Federal Water Pollution Control Act.

7. Measures for minimizing accelerated soil erosion will continue to be made on a site-specific basis through evaluation of management actions and implementation of best management practices.

8. Proposed uses will be evaluated for their potential to release hazardous materials in the environment. Use of hazardous materials must comply with the Resource Conservation and Recovery Act.

Disposal of hazardous materials on surface tracts is prohibited. The discovery of unpermitted hazardous material will be handled in accordance with the reporting, removal, and remediation requirements of the Comprehensive Environmental Response, Compensation and Liability Act.

9. Specific surface tracts identified for disposal will be evaluated for the presence of significant resource values prior to the final decision. Resources to be evaluated will include minerals, recreation, cultural, wetlands, and threatened, endangered and other special status species.

10. For some tracts of land, the title is clouded. These tracts are claimed by private owners, but government land records show that they were never transferred from Federal ownership. Claimants may apply for transfer of these tracts under the Color-of-Title Act, and if qualified, may purchase the tracts to obtain title. Color-of-title cases will be processed on a case-by-case basis. A list of tracts that appear to be of uncertain title is presented in Appendix A.

11. Minerals rights that are reserved to the United States are available for disposal to surface owners under the authority of Sections 202 and 209 of the Federal Land Management and Policy Act (FLPMA). Applications for conveyance of reserved mineral interests will be processed on a case-by-case basis.

12. Resolution of unauthorized use will be pursued on a case-by-case basis. Resolution may include termination of use and payment of damages, including reclamation of disturbed land, if needed.

13. Opportunities for land acquisition will be considered. Criteria for consideration of land acquisitions are presented in Appendix A.

14. All tracts identified as available for disposal through sale or exchange are right-of-way avoidance areas if the granting of a right-of-way would adversely affect tract marketability.

15. Review of existing withdrawals will determine if they are fulfilling their intended purpose or are not needed. Existing withdrawals are listed in Appendix A.

16. All surface tracts are available for mineral development. The potential for mineral development is presented in Appendix B. Before any tracts are disposed, a minerals report will be prepared. If valuable minerals are present, mineral rights may be reserved to the U.S. and will remain open to development.

17. All motorized vehicle use is limited to existing roads on all tracts.

18. BLM will not permit livestock grazing on tracts identified for transfer to other agencies, or on tracts identified as suitable for disposal. Tracts identified for partnership management would be available for livestock grazing, only if the implementation plan determines that livestock grazing is compatible with management objectives.

19. Recreation Opportunity Spectrum classification objectives (Appendix C) will be used in evaluating recreational opportunities on the surface tracts.

20. Land-use proposals will include consideration of impacts to visual resources.

Alternatives in Detail for Each Tract

Table 2-1, on the opposite page, provides a list of all of the tracts, giving the tract name, acreage, county and legal description. The tracts are listed by their location from north to south. The alternatives for each tract are presented in the following portion of this chapter. The alternatives consist of three elements.

> **Management Objectives** outline management approach and the resource conditions to be maintained or enhanced. When approved, management objectives become land-use decisions to guide future actions.
>
> **Land-Use Allocations** are decisions of what uses will be allowed, restricted or excluded. Land-use allocations also control what forms of disposal, such as by sale or exchange, are allowed or not allowed.
>
> **Management Actions** are anticipated implementation measures to ensure management objectives are met and land-use allocations are followed. Not all management actions can be anticipated at this time. Some of the management actions listed may prove to be unnecessary.

In presentation of the alternatives, two tracts in Baxter County, Arkansas are grouped together as the Long Mountain Creek Tracts.

Table 2-1. List of BLM-Surface Tracts in Arkansas and Louisiana.

Name of Tract	Acres	County/ Parish	Legal Description
Arkansas			**5th Principal Meridian**
Long Mountain Creek Tracts	80	Baxter	T. 21 N., R. 14 W., Sec. 19, SE¼NW¼, SW¼SW¼
Foster Branch Tract	40	Fulton	T. 21 N., R. 14 W., Sec. 31, SE¼NW¼
Buffalo River Tract	40	Searcy	T. 15 N., R. 18 W., Sec. 3, SW¼NE¼
Point Peter Mountain Tract	40	Searcy	T. 14 N., R. 18 W., Sec 11, SW¼NW¼
Calf Creek Tract	40	Searcy	T. 14 N., R. 18 W., Sec. 14, NE¼NE¼
Campbell Hollow Tract	40	Searcy	T. 14 N., R. 17 W., Sec 31, NW¼NE¼
Bear Creek Tract	160	Searcy	T. 13 N., R. 17 W., Sec. 20, W½NE¼, SE¼NW¼, NW¼SE¼, NW¼SE¼
Middle Fork Tract	40	Searcy	T. 13 N., R. 17 W., Sec 27, NW¼SE¼
Drasco Tract	5	Cleburne	T. 12 N., R. 9 W., Sec. 33, N½NW¼SW¼SW¼
Locust Mountain Tract	40	Crawford	T. 11 N., R. 31 W., Sec. 24, NE¼NE¼
West Fork Tract	10	Van Buren	T. 10 N., R. 16 W., Sec. 9, N½S½NE¼SE¼
Redland Mountain	40	Pike	T. 5 S., R. 26 W, Sec. 11, NW¼SW¼
Louisiana			**Louisiana Meridian**
Black Lake	135	Natchitoches	T. 12 N., R. 7 W., Sec. 32, Lots 5, 6 ,8 ,11 and 12.
Rocky Bayou	21	Desoto	T. 11 N., R. 12 W., Sec. 12, Lot 2
Big Saline Bayou	158	Rapides	T. 5 N., R. 3 E., Sec 26, NW¼
Duck Lake	64	St. Martin	T. 14 S., R. 11 E., Sec. 26, Lots 8, 9 and 10

Alternatives for the Long Mountain Creek Tracts

Alternative 1 **Custodial Management (No Action)**	**Alternative 2** **Disposal**	***-Preferred-*** **Alternative 3** **Partnership**
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Restore and maintain native plant communities, including dolomite glades and mesic forest communities. Manage recreation in a rural setting.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tracts would not be available for disposal.	The tracts would be available for disposal by sale or exchange. If the tracts are found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tracts would also be available for Recreation and Public Purposes Act conveyance.	The tracts would be available for management partnership agreements. They would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives.

Rationale for the Preferred Alternative: Managing this tract in partnership with a resource conservation organization would protect and enhance existing values, and contribute to regional conservation efforts.

Alternatives for the Foster Branch Tract

Alternative 1 **Custodial Management (No Action)**	**Alternative 2** **Disposal**	***-Preferred-*** **Alternative 3** **Partnership**
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Restore and maintain native plant communities, including dolomite glades and calcareous woodland. Manage recreation in a rural setting.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tracts would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives.

Rationale for the Preferred Alternative: Managing this tract in partnership with a resource conservation organization would protect and enhance existing values, and contribute to regional conservation efforts.

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Alternatives for the Buffalo River Tract

Alternative 1 **Custodial Management (No Action)**	**Alternative 2** **Disposal**	***-Preferred-*** **Alternative 3** **Partnership**
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Manage for viable native habitats and recreation in a rural setting.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would available for transfer to the National Park Service for management as part of the Buffalo National River. If not suitable for transfer to the National Park Service, tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Process a withdrawal application for transfer of the tract.

Rationale for the Preferred Alternative: Management of this tract by the National Park Service (NPS), as part of the Buffalo Nation River, would protect and enhance existing resource values.

Alternatives for the Point Peter Mountain Tract

Alternative 1 **Custodial Management (No Action)**	**Alternative 2** **Disposal**	***-Preferred-*** **Alternative 3** **Partnership**
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Restore and maintain native plant communities, including mesic forests and glade communities, and special status plant species. Manage recreation in a rural setting.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for transfer to the USDA Forest Service for management as part of the Ozark National Forest. If not suitable for transfer to the USDA Forest Service, the tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Process withdrawal application for transfer to the USDA Forest Service.

Rationale for the Preferred Alternative: Management of this tract by the U.S. Forest Service as part of the Ozark National Forest, would protect and enhance existing resource values.

Alternatives for the Calf Creek Tract

Alternative 1 **Custodial Management (No Action)**	**Alternative 2** **Disposal**	***-Preferred-*** **Alternative 3** **Partnership**
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Restore and maintain native plant communities, including mesic forests and glade communities, and special status plant species. Manage recreation in a rural setting.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives.

Rationale for the Preferred Alternative: Managing this tract in partnership with a resource conservation organization would protect and enhance existing values, and contribute to regional conservation efforts.

Alternatives for the Campbell Hollow Tract

Alternative 1 **Custodial Management (No Action)**	**Alternative 2** **Disposal**	***-Preferred-*** **Alternative 3** **Partnership**
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Restore and maintain native plant communities, including mesic and acid forest communities and glade communities, as well as special status plant species. Manage recreation in a rural setting.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives.

Rationale for the Preferred Alternative: Managing this tract in partnership with a resource conservation organization would protect and enhance existing values, and contribute to regional conservation efforts.

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Alternatives for the Bear Creek Tract

Alternative 1 **Custodial Management (No Action)**	**Alternative 2** **Disposal**	***-Preferred-*** **Alternative 3** **Partnership**
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Restore and maintain native plant communities, including mesic and acid forest ccommunities and glade communities. Manage recreation in a rural setting.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives.

Rationale for the Preferred Alternative: Managing this tract in partnership with a resource conservation organization would protect and enhance existing values, and contribute to regional conservation efforts.

Alternatives for the Middle Fork Tract

Alternative 1 **Custodial Management (No Action)**	*-Preferred-* **Alternative 2** **Disposal**	**Alternative 3** **Partnership**
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Restore and maintain native plant communities, including mesic and acid forest communities and glade communities, as well as special status plant species. Manage recreation in a rural setting.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives.

Rationale for the Preferred Alternative: This tract is small and isolated from other public ownership, with no known resources of significance or of value to be protected or enhanced. Disposal of the tract would increase management efficiency.

Alternatives for the Drasco Tract

Alternative 1 **Custodial Management (No Action)**	*-Preferred-* **Alternative 2** **Disposal**	**Alternative 3** **Partnership**
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Restore and maintain native plant community.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives.

Rationale for the Preferred Alternative: This tract is small and isolated from other public ownership, with no known resources of significance or of value to be protected or enhanced. Disposal of the tract would increase management efficiency.

Alternatives for the Locust Mountain Tract

Alternative 1 Custodial Management (No Action)	Alternative 2 Disposal	-*Preferred*- Alternative 3 Partnership
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Restore and maintain native plant communities, including mesic and acid forest communities and glade communities, as well as special status plant species. Manage recreation in a rural setting.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives.

Rationale for the Preferred Alternative: Managing this tract in partnership with a resource conservation organization would protect and enhance existing values, and contribute to regional conservation efforts.

Alternatives for the West Fork Tract

Alternative 1 Custodial Management (No Action)	*-Preferred-* Alternative 2 Disposal	Alternative 3 Partnership
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Maintain native Dry Slope Woodland plant community. Manage recreation in a rural setting.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives.

Rationale for the Preferred Alternative: This tract is small and isolated from other public ownership, with no known resources of significance or of value to be protected or enhanced. Disposal of the tract would increase management efficiency.

Alternatives for the Redland Mountain Tract

Alternative 1 Custodial Management (No Action)	Alternative 2 Disposal	*–Preferred–* Alternative 3 Partnership
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Maintain and enhance native plant communities, including Novaculite Ridgetop and glade communities, as well as protect breeding habitat for Rufous-crowned sparrow (*Aimophila ruficeps*). Manage recreation in a rural setting
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for transfer to the USDA Forest Service for management as part of the Ouachita National Forest. If not suitable for transfer to the USDA Forest Service, the tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Process withdrawal application for transfer to the USDA Forest Service.

Rationale for the Preferred Alternative: Management of this tract by the U.S. Forest Service as part of the Ouachita National Forest would protect and enhance existing resource values.

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Alternatives for the Black Lake Tract

Alternative 1 Custodial Management (No Action)	Alternative 2 Disposal	*-Preferred-* Alternative 3 Partnership
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Manage for viable native habitats and recreation in a rural setting.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives.

Rationale for the Preferred Alternative: Managing this tract in partnership with a resource conservation organization would protect and enhance existing values, and contribute to regional conservation efforts. In addition, this tract has high potential for oil and gas production, and could be leased for oil and gas development. Retention of surface ownership would facilitate managing oil and gas operations to protect surface resources.

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Alternatives for the Rocky Bayou Tract

Alternative 1 **Custodial Management (No Action)**	**Alternative 2** **Disposal**	***-Preferred-*** **Alternative 3** **Partnership**
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Manage for viable native habitats and recreation in a rural setting.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives.

Rationale for the Preferred Alternative: Managing this tract in partnership with a resource conservation organization would protect and enhance existing values, and contribute to regional conservation efforts. In addition, this tract has high potential for oil and gas production, and could be leased for oil and gas development. Retention of surface ownership would facilitate managing oil and gas operations to protect surface resources.

Alternatives for the Big Saline Bayou Tract

Alternative 1 **Custodial Management (No Action)**	**Alternative 2** **Disposal**	***-Preferred-*** **Alternative 3** **Partnership**
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Manage for continued oil and gas production from existing leases, recreation in a rural setting and maintenance of viable native habitats.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives. Construction activities would only be conducted during the months of June through September to prevent erosion and decrease sedimentation into surface waters.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives, including possible construction of facilities such as parking, a boat launch, a shelter (pavilion) and a trail.

Rationale for the Preferred Alternative: Managing this tract in partnership with a resource conservation organization would protect and enhance existing values, and contribute to regional conservation efforts. The tract is currently leased for oil and gas production. Retention of surface ownership would facilitate managing oil and gas operations to protect surface resources.

Alternatives for the Duck Lake Tract

Alternative 1 **Custodial Management (No Action)**	**Alternative 2** **Disposal**	***-Preferred-*** **Alternative 3** **Partnership**
Management Objectives	**Management Objectives**	**Management Objectives**
Manage proposed uses on a case-by-case basis.	Increase management efficiencies through disposal or transfer.	Manage for continued oil and gas production from existing leases, recreation in a rural setting and maintenance of viable native habitats.
Land-Use Allocations	**Land-Use Allocations**	**Land-Use Allocations**
The tract would not be available for disposal.	The tract would be available for disposal by sale or exchange. If the tract is found to have high resource values, disposal would be allowed subject to a protective conservation easement. The tract would also be available for Recreation and Public Purposes Act conveyance.	The tract would be available for management partnership agreements. It would also be available for Recreation and Public Purposes Act conveyance, but only for uses primarily directed to attaining the management objectives.
Management Actions	**Management Actions**	**Management Actions**
Process land use proposals on a case-by-case basis.	Process disposal actions or applications for conveyance.	Develop partnership agreements to attain management objectives. Prepare implementation plans and take specific actions required to accomplish objectives.

Rationale for the Preferred Alternative: Managing this tract in partnership with a resource conservation organization would protect and enhance existing values, and contribute to regional conservation efforts. The tract is currently leased for oil and gas production. Retention of surface ownership would facilitate managing oil and gas operations to protect surface resources

Chapter 3
Affected Environment

Introduction

This Chapter presents a description of the environment, and is the basis for comparison of impacts discussed in Chapter 4. The 14 critical environmental elements listed in Table 3-1 must be considered in this analysis. Some of the elements are not analyzed, because they are not present on any tract. As shown in Table 3-1, these are Areas of Critical Environmental Concern, Prime and Unique Farmlands, Threatened and Endangered Species, Wilderness, and Wild and Scenic Rivers. Areas of Native American Religious Concerns have not been identified and are not discussed.

Table 3-1 Environmental Elements Present or Not Present

Environmental Elements * Critical, covered by statute ** Not covered by statute	**Present or Not Present**	
	Not Present	**Present**
* Air Quality		✓
* Areas of Critical Environmental Concern	✓	
* Cultural Resources		✓
* Farm Lands (Prime or Unique)	✓	
* Flood Plains	✓ (Arkansas)	✓ (Louisiana)[1]
* Native American Religious Concerns	✓	
* Threatened and Endangered Species		✓
* Waste, Hazardous or Solid	[2]	
* Water Quality, Surface and Ground		✓
* Wetlands/Riparian Zones	✓(Arkansas)	✓(Louisiana)
* Wild and Scenic Rivers	✓	
* Wilderness	✓	
* Environmental Justice Concerns	[2]	
* Invasive, Nonnative Species	✓(Arkansas)	✓(Louisiana)[3]
** Coastal Zone Management	✓(Arkansas)	✓ (Louisiana)
** Wildlife and Vegetation		✓
** Recreation and Visual		✓

[1] Addressed under Wetland/Riparian Zone

[2] Element which may be present but not analyzed in detail

[3] Present only on the Big Saline Bayou tract, discussed with wildlife and vegetation

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Four critical elements are present on tracts in Louisiana only. These are Flood Plains, Wetlands/Riparian Zones, Intrusive, Nonnative Species and Coastal Zone Management. Concerns relative to the Flood Plains element will be discussed in the sections that address Wetlands/Riparian Zones. The Intrusive, Nonnative Species element will be discussed in the Wildlife and Vegetation sections.

Topics Not Analyzed in Detail

Several topics are discussed on a general basis in this chapter, but not analyzed in Chapter 4. These are: Environmental Justice, and Waste, Hazardous or Solid, and the Coastal Zone Management concerns relative to Louisiana. The following discussions, separately for each state, include a description of these elements and reasons why detailed analysis is not needed.

Arkansas

Environmental Justice

All of the tracts in Arkansas are in a rural setting and are not near developed residential communities. However, scattered residences (primarily farm houses) are in the vicinity of the tracts. No concentrations of minorities, low income families, or their residences are known to exist in the vicinity of the tracts that could be affected by the management alternatives. The alternatives are not expected to affect the public health and safety of minority individuals and low income families.

Waste, Hazardous and Solid

The tracts are spread over seven counties of the state of Arkansas. During the on-site inspection, no solid waste dump site or hazardous waste dump site was located on or around any of these tracts. Between June 15 and June 30, 1999 various county and state agencies were contacted and their data base was reviewed to find out the presence of any solid waste site, hazardous waste site, or record of any spills on or around these subject tracts. Based upon current information, it was stated that there are no records of any solid waste disposal site, storage of any hazardous material, spills, or illegal dumping on any of these subject tracts or within a half mile radius of the subject tracts.

Louisiana

Environmental Justice

All of the tracts in Louisiana are in a rural setting and not close to developed residential communities. However, there are scattered residences in the vicinity of the tracts. No concentrations of minorities, low income families, or their residences are known to exist in the vicinity of the tracts that could be affected by any of the management alternatives. The alternatives are not expected to affect the public health and safety of minority individuals and low income families.

Waste, Hazardous and Solid

These four tracts are located in different parishes in the state of Louisiana. During the on-site inspections, with the exception of the Big Saline Bayou Tract in Rapides Parish, no solid waste dump sites or hazardous waste dump sites were located on or around any of these tracts. During an on-site inspection on April 19, 1999 of the Big Saline Bayou Tract in Rapides Parish, at least three dump sites were located on the tract. These sites were littered with discarded refrigerators, roofing materials, empty broken drums, scrap metals, and other household wastes. Also, two producing wells which are located on the subject tract showed sign of soil contamination in and around the production sites. A subsequent visit of the site on July 1, 1999 showed that the contaminated soil was excavated and was replaced with clean soil. The three dump sites have been cleaned, and a final report is being prepared.

Between July 8 and July 14, 1999 various parish and state agencies were contacted and their data base was reviewed to find out the presence of any solid waste site, hazardous waste site, or record of any spills on or around these subject tracts. Based upon current information, it was stated that there are no records of any solid waste disposal site, storage of any hazardous material, spills, or illegal dumping on any of these subject tracts or within a half mile radius of the subject tracts.

Coastal Zone Management

Coastal Zone Management considerations would apply only to the Duck Lake tract in St. Martin Parish, Louisiana. This tract is within the boundaries of Louisiana's coastal zone management area and therefore, any proposed actions occurring on the tract would be subject to a coastal zone consistency determination. A complete description of the boundary of Louisiana's coastal zone management area may be found in the Revised Statutes of Louisiana, Subpart C., R. S. 49:214.24.

Topics Analyzed in Detail

The topics discussed are those which would be affected by alternative implementation, or are of sufficient concern to warrant impact analysis. The environmental impacts for these topics are discussed in Chapter 4.

The narrative presentation of topics is organized by state, first Arkansas followed by Louisiana. The topics are Air Quality and Climate, Cultural Resources, Minerals, Soils, Water Quality, Surface and Ground, Wetlands/Riparian Zones, Federally and State Listed Species, and Wildlife and Vegetation. More detailed information on some of the topics is available in the appendices. Additional information for Minerals can be found in Appendix B. Recreational and Visual information can be found in Appendix C. Additional information on Soils can be found in Appendix D.

Arkansas

Air Quality and Climate

In general the climate in Arkansas is characterized by warm to hot summers, cool dry winters, and variable annual precipitation. Daytime humidity generally ranges from 50 to 60%. Annual precipitation is 50 to 55 inches and occurs primarily in the summer months as thunderstorms. Average snowfall is between 4 to 9 inches and occurs primarily in the northern half of the state in the mountains. Prevailing winds are southerly to northeasterly.

The tracts in Arkansas are in a rural setting with production of agricultural crops and forest products being the largest industries in the counties. For this reason there are no major sources of air pollutants in the area of the tracts and they are not located in a nonattainment area for the six criteria air pollutants designated by the Environmental Protection Agency: sulphur dioxide, nitrogen dioxide, carbon monoxide, ozone, hydrocarbons, and particulates.

Cultural Resources

Most of the tracts included in this evaluation have been surveyed for cultural resources (Klinger and Kandare 1984, Pace 1999, and Spears and Johnson, 2000). The tracts which have not been surveyed are in Baxter, Cleburne, Crawford, Searcy, Pike and Van Buren Counties. Tracts which have been surveyed are in Baxter, Fulton, and Searcy Counties.

Evidence of human occupation in Arkansas has been dated from the paleolithic period. These sites are few but are very important. The Archaic Period in Arkansas is better understood than the paleolithic but extensive research should be done. Native American sites which date from the Historic Period are sources of information from one of the most significant times in all of North American history. Historic properties or other cultural resources may be on one or more of the unsurveyed tracts.

Minerals

In Arkansas, the most prolific oil and gas producing area is the Arkoma Basin. In this basin, the major producing horizons are the Pennsylvanian Atoka sandstones and basal Pennsylvanian Hale Formation. These two strata are absent on the tracts in Fulton, Baxter, Cleburne, Pike and Searcy Counties. The Pennsylvanian Hale Formation is present on the Crawford County tract and is at the surface on the Van Buren tract.

All tracts have a low probability for development. All tracts are located some distance from the nearest commercial production. As in the case all remote areas that are far from established production, substantial gas reserves would have to be developed to justify the laying of gas lines into the area to produce any gas discovered. This has not occurred for any of these tracts. Additional information on minerals can be found in Appendix B.

Recreation and Visual Resources

Recreation The Drasco tract in Cleburne County and the West Fork Tract in Van Buren County will not be considered in this discussion because these tracts (5 and 10 acres respectively) are small, and there is a residence on the Drasco tract, and the West Fork tract is in close proximity to a residence.

The other tracts in Arkansas would be classed as being in a "rural" environment (Appendix C). The activity most likely to occur on these tracts would be dispersed recreation such as hunting. The broad setting including the privately owned land adjacent to the tracts would be that resource modification and utilization practices are obvious and the sights and sounds of human development are apparent. However, there are no developed recreational sites or trails on any of the tracts. The Calf Creek tract in Searcy County has an unsurfaced road that bisects the tract in a north/south direction. This road was probably built as a logging road prior to establishment of the Eastern States Office of BLM in 1954. The road is not maintained by the BLM and can only be accessed by crossing privately owned land. Therefore, the road is not accessible to the general public. There is a road adjacent to the north boundary of the Foster Branch tract in Fulton County. This road is a private farm road, blocked by a locked gate and is not accessible without permission of the landowner.

Visual Resources The visual resource in both the background (up to 15 miles from the tract) and the middleground (3-5 miles from the tract) consists of residences, roads both paved and unpaved, cultivated fields and pastureland, forested areas or areas where forest products have been harvested. The visual resource found on the tracts would be that of steep to moderately steep mountainsides to gently rolling hills, second growth mixed hardwood forest and scattered rock outcrops.

All the tracts in Arkansas would fall into the Class III visual resource rating category (Appendix C). This does not mean that the visual resource found on or in the vicinity of the tracts is not aesthetically pleasing, it means that the natural visual resource of mixed hardwood forest, rolling hills and mountains has been modified by human activity, and these modifications would be apparent to an individual visiting the tract or looking at the surrounding area from the tracts.

Soils

Soil Complexes or Associations represent several soil types, each with it's own specific characteristics that are usually found together and so intricately mixed that they could not be mapped separately. The descriptions in Appendix D provide general characteristics of the complexes/associations found on the Arkansas tracts. The complexes/associations found on each tract are shown in Table 3-2.

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Table 3-2 Soils complexes in Arkansas

Tracts	Soils (see Appendix D for descriptions)
Long Mtn. Creek No. (Baxter County)	Arkana_Moko complex 8-20% slopes (dominate soil), Arkana-Moko complex 20-40% slopes, Doniphan, very, cherty silt loam, 8-20% slopes
Long Mtn. Creek So. (Baxter County)	Arkana-Moko Complex 20-40% slopes (dominate soil), Doniphan, very cherty silt loam, 3-8% slopes, and Doniphan, very cherty silt loam, 8-20% slopes.
Foster Branch (Fulton County)	Arkana-Moko Complex 8-20% slopes (dominate soil), Gassville-Doniphan Complex 3-8% slopes
Buffalo River (Searcy County)	Noark very cherty silt loam 8-20% slope* Clarksville very cherty silt loam, 20-50% slopes
Point Peter Mtn. (Searcy County)	Nella-Steprock-Mountainburg Complex 40 to 60% slopes (dominate soil), Linker gravelly fine sand loam, 8-12% slopes Nella-Steprock Complex, 3-20% slopes
Calf Creek (Searcy County)	Nella-Steprock-Mountainburg complex 40-60% slopes (dominate soil), Linker-Mountainburg Complex 8-20% slopes
Campbell Hollow (Searcy County)	Nella-Steprock-Mountainburg Complex 40- 60% slopes (dominate soil), Enders Stony Loam, 3-20% slopes, Enders-Nella Stony Loams 3-20% slopes
Bear Creek (Searcy County)	Nella-Steprock-Mountainburg Complex 40-60% slopes (dominate soil), Nella-Steprock-Mountainburg Complex 20-40% slopes, Nella-Steprock Complex 3-20% slopes, Enders-Nella Stony Loams 3-20% slopes
Middle Fork (Searcy County)	Nella-Steprock-Mountainburg Complex 20-40% slopes (dominate soil), Enders-Nella Stony Loams 3-20% slopes
Drasco (Cleburne County)	Enders-Nella-Steprock Complex 8-20% slopes.
Locust Mountain (Crawford County)	Nella-Enders Association (steep).
West Fork (Van Buren)	Enders-Nella-Steprock Complex 20-40% slopes.
Redland Mountain (Pike County)	Bengal-Bismarck-Yanush complex 15-35% slopes (dominate soil), Bengal-Bismarck-Yanush complex 8-15% slopes, Bigfork-Yanush Rock Outcrop Complex 35-60% slope

Water Quality, Surface and Ground

The primary elements tested for by the U.S. Geological Survey when doing water quality sampling are: Total Dissolved Solids, Hardness (calcium carbonate), Nitrate as nitrogen, Chloride and Iron. The maximum permissible contaminant level for water quality are: 500 milligrams/liter (mg/l) for Total Dissolved Solids, (no measure available for hardness), 10 mg/l for Nitrate, 250 mg/l for Chloride, and 300 mg/l for Iron (National Water Summary 1986).

The tracts in Baxter, Fulton and Searcy Counties are underlain by the Nacatoch Aquifer. The Nacatoch Aquifer contains freshwater in parts of northeastern and southwestern Arkansas. It is used primarily for public and industrial supplies and ranks sixth in total groundwater supplies in the State (National Water Summary 1986). Six to ten wells in Fulton County were found to yield contaminated water. None of the tested wells in Baxter and Searcy Counties were found to yield contaminated water (National Water Summary 1986).

The tracts in Cleburne, Crawford, Pike and Van Buren Counties are not underlain by a principal aquifer. No wells in these counties are known to yield contaminated water (National Water Summary 1986).

No water quality samples were taken of water in the intermittent stream channels on the tracts in Arkansas. However, because of the rural setting in which the tracts are located, lack of development - either industrial or agricultural on or in close proximity to the tracts, the water in these streams, when flowing should not contain more than the maximum contaminant level. Tract specific information is found in Table 3-3.

Wetland/Riparian Zones

All of the tracts in Arkansas are upland in nature. Tract specific information is found in Table 3-3. There are no wetland areas on or in the vicinity of any of the tracts. No riparian areas were observed on or associated with any stream channel. No streams, intermittent stream channels or riparian areas were observed on the Drasco, Redland Mountain, Campbell Hollow, and West Fork tracts.

The Long Mountain Creek North and South tracts have intermittent stream channels, which are tributary to Long Mountain Creek. There is a small intermittent stream channel on the Locust Mountain tract that crosses the tract's northwest corner and drains in a southwesterly direction. The Foster Branch tract has an intermittent stream channel that runs through the middle of the tract in a westerly direction and drains into Foster Branch Creek. There is an intermittent stream channel on the Calf Creek tract that runs in a southerly direction starting at the tract's north boundary and drains into Calf Creek. On the Bear Creek tract, there are three intermittent stream channels which drain in an easterly direction from the west boundary. These intermittent streams drain into Bear Creek. On the Middle Fork tract, there is an intermittent stream channel that crosses the northeast corner of the tract and drains in southeasterly direction.

Table 3-3. Water resources on the Arkansas Tracts

Tracts	**Water Quality Surface/Ground**	**Wetlands/Riparian Zones**
Long Mtn. Creek No. (Baxter Co.)	Mountain Creek, an ephemeral stream, bisects the northwest corner.	This tract has intermittent stream channels, which are tributary to Long Mountain Creek. No riparian areas were observed or associated with these intermittent stream channels.
Long Mtn. Creek So. (Baxter Co.)	Unnamed ephemeral tributary of Mountain Creek.	This tract has intermittent stream channels, which are tributary to Long Mountain Creek. No riparian areas were observed or associated with these intermittent stream channels.
Foster Branch (Fulton Co.)	Ephemeral sandy/gravel bottomed creek crosses the tract and drains west to Foster Branch.	There is an intermittent stream channel that runs through the middle of the tract in a westerly direction and drains into Foster Branch Creek. No riparian areas were observed or associated with this intermittent stream channel.

Tracts	Water Quality Surface/Ground	Wetlands/Riparian Zones
Buffalo River (Searcy Co.)	Ephemeral drainage to Buffalo River	There is no riparian vegetation on the tract.
Point Peter Mtn. No. (Searcy Co.)	Unnamed intermittent stream, a tributary of Richmond Creek.	An unnamed intermittent stream, a tributary of Richmond Creek is on the tract. No riparian areas have been identified.
Calf Creek (Searcy Co.)	An unnamed tributary of Calf Creek, a part of the Buffalo River drainage basin.	There is an intermittent stream channel that runs in a southerly direction starting at the north boundary of the tract and drains into Calf Creek. No riparian areas were observed or associated with this intermittent stream channel.
Campbell Hollow (Searcy Co.)	Campbell Hollow is to the west of the tract.	No streams, intermittent stream channels or riparian areas were observed on the tract.
Bear Creek (Searcy Co.)	An unnamed drainage flows into Bear Creek.	There are 3 intermittent stream channels which drain in a easterly direction from the west boundary of the tract. These intermittent streams drain into Bear Creek. No riparian areas were observed or associated with these intermittent stream channels.
Middle Fork (Searcy Co.)	Tributary of Middle Fork of Red River at northeast corner.	There is an intermittent stream channel that crosses the northeast corner of the tract and drains in southeasterly direction. No riparian areas were observed or associated with this intermittent stream channel.
Drasco (Cleburne Co.)	Ephemeral tributary of Cedar Creek.	No streams, intermittent stream channels or riparian areas were observed on the tract.
Locust Mountain (Crawford Co.)	Ephemeral stream flows south through the northwest corner.	A small intermittent stream channel crosses the northwest corner of the tract and drains in a southwesterly direction. No riparian areas were observed or associated with this intermittent stream channel.
West Fork (Van Buren Co.)	Nearest water is West Fork Point Remove Creek.	No streams, intermittent stream channels or riparian areas were observed on the tract.
Redland Mountain (Pike Co.)	No surface water.	No streams, intermittent stream channels or riparian areas were observed on the tract.

Federally and State Listed Species

There were no federally listed species found on any of the tracts in Arkansas, however, it is possible that the Indiana bat (*Myotis sodalis*) and/or gray bat (*Myotis grisescens*), both listed as endangered by the U.S. Fish and Wildlife Service, could utilize these tracts at least intermittently. There were no caves recorded on any of the BLM-administered tracts.

The Indiana bat ranges from the Ozark region in Oklahoma, to southern Wisconsin, east to Vermont and south to northern Florida. Limestone hibernation caves, with very specific temperature and moisture parameters, are the limiting factor. Approximately 87% of the entire population hibernates in only seven caves. Although none of the BLM-administered tracts in Arkansas contain caves, some of the tracts do contain marginal summer foraging habitat. Summer foraging by females and juveniles is limited to riparian and floodplain areas, and several maternity colonies have been found under loose bark and in the hollows of trees. Males forage over floodplain ridges and hillside forests and roost in caves.

The gray bat populations are found primarily in Alabama, northern Arkansas, Kentucky, Missouri and Tennessee. This species is restricted entirely to caves and cave-like habitats. During the summer, gray bats are highly selective for caves providing specific temperature and roost conditions. Usually these caves are located within a kilometer of a river of reservoir. In winter, they utilize only deep, vertical caves having a temperature of 6-11 degrees C. Nine caves are believed to house roughly 95 percent of the hibernating population. Although there are no roosting or hibernation caves on BLM-administered land, there is potential for them.

Vegetation, Wildlife and Special Status Species

The following tract descriptions are based on surveys completed by the Arkansas Nature Conservancy during the spring and summer of 2000. The plant communities are categorized using the National Vegetation Classification System (Weakley, et al. 1998), and were mapped on aerial photographs to determine acreages. High quality plant communities and rare plant occurrences were mapped and registered with the Arkansas Natural Heritage Commission. Although specific surveys for wildlife were not conducted, observed wildlife was noted and species list compiled.

Long Mountain Creek Tracts

General The Long Mountain Creek tracts are located approximately two miles east of Bull Shoals Lake in an area of mixed forest and scattered pasture land. Both are bisected by intermittent tributaries of Mountain Creek. There is evidence of historic logging along the ridgelines and upper slopes of both tracts, and although there are old fire scars on larger trees, there is no evidence of recent burning. An ATV trail runs from the southeast corner of the north tract to the creek.

Vegetation Five plant communities have been identified on the Long Mountain tracts: Wooded Herbaceous Vegetation, Calcareous Woodland, Dry Woodland, Dry-mesic Alkaline Forest, and Mesic Ravine Forest.

Of these communities, the endemic Wooded Herbaceous Vegetation community associated with dolomite outcrops is considered the most important ecologically. This vegetation community is associated with scattered dolomite outcrops on both tracts (18% of the south tract and 8% of the north tract). The vegetation is characterized by medium-tall (up to 3') grasses and forbs with occasional stunted trees and shrubs. Older trees on these sites are 80+ in age, primarily post oak, white oak and black gum on the steeper slopes or within the riparian zones. The dolomite glade community is endemic to the Ozark Highlands, but high quality examples are rare and few are located on public or conservation lands.

The Calcareous Woodland covers almost half of the south tract and about 7% of the north tract. This dry, open short (up to 25') woodland occurs on the stony slopes and around the dolomite glades. It is dominated by chinkapin oak (*Quercus muehlenbergii*) and red cedar

(*Juniperus virginiana*), with white ash (*Fraxinus americana*) and various other oaks (*Quercus sp.*).

The Dry Woodland covers almost half (48%) of the north tract and 28% of the south tract. It is a dry, open, relatively short (up to 30'), woodland dominated by a mix of oak species (post oak, blackjack oak, black oak). The midstory can be thick in places with various blueberry and serviceberry species. Lichens and mosses are abundant.

The Dry-mesic Alkaline Forest is more prevalent on the north tract (37%) than the south tract (4%). It is a dry-mesic, tall (up to 80'), closed canopy forest occurring along the lower slopes and bottoms of Mountain Creek. White oak (*Quercus alba*), Chinquapin oak (*Quercus muehlenbergii*), and redbud (*Cercis canadensis*) predominate here. The shrub layer is thick with saplings of overstory species and the herbaceous cover is variable, largely dependent on crown opening.

The Mesic Ravine Forest covers approximately 4% of the south tract. This mesic, closed canopy forest community occurs in the bottoms and lower slopes of a relatively steep-sided ravine. The trees are tall (up to 80') and species composition is diverse. The substrate is various types of colluvium derived from dolomite and chert. The creek is intermittent and the bluff lines are seepy after rains. Numerous fern species were recorded in this community.

Wildlife Although the tract was not specifically surveyed for wildlife, a total of 41 species were recorded on site. Of particular note, was the high diversity of neotropical migratory birds (25). Some of the species identified are of high regional conservation concern due to declining populations, including Worm-eating Warbler and Louisiana waterthrush.

Foster Branch Tract

General The Foster Branch tract is located in an area of converted pastures and woodland. The tract is split by an ephemeral creek. The substrate is broken dolomite and chert over massive dolomite. Small, flat dolomite outcrops are also exposed on the tract. The tract is hilly with slopes of 12% to 18%. The tract is fenced and moderately grazed. There is some evidence of past timber cutting, but the trees on the tract (25 -80 years) are older than trees in the surrounding woodlands. There is no evidence of recent fire. Eastern red cedar have become pervasive on the tract, none are older than 30 years.

Vegetation Four plant communities were identified on the Foster Branch tract, Wooded Herbaceous Vegetation, Calcareous Woodland, Dry Woodland, and Dry-mesic Alkaline Forest.

The Wooded Herbaceous Vegetation associated with the linear dolomite glades and areas of shallow soil in approximately 6% of the tract. Vegetation is dominated by medium-tall (up to 3') grasses and forbs, occasionally with stunted trees and shrubs. Herbaceous cover is 100%, except where bare rock is exposed. The relatively recent invasion of red cedar (none older than 30 years), lack of fire and possibly grazing have probably degraded the glades. Because of their rarity, intact glade communities typically support a large number of endemic special status species. There are few high quality examples of this community in public or conservation ownership.

The Calcareous Woodland (51%) is a dry, open, short (up to 25') woodland on the slopes and around the dolomite glades. The trees are stunted and dominated by chinkapin oak and red cedar. The ground cover is sparse and suppressed.

The Dry Woodland covers approximately 17% of the tract. It is dry, open and relatively short (up to 30') and is strongly dominated by post oak (*Quercus stellata*). Lichens and mosses are abundant.

The Dry-mesic Alkaline Forest covers approximately 21% of the tract. It is dry, becoming more mesic along the lower slopes and creek where the canopy is closed and trees are tall (up to 80'). The herbaceous layer is variable, depending on canopy openings and is comprised of primarily grasses and forbs.

Wildlife Although the tract was not specifically surveyed for wildlife, a total of 35 species were recorded on site. Of particular note, was the good diversity of neotropical migratory birds (24). Some of the species identified are of regional conservation concern due to declining populations.

Buffalo River Tract

General This tract is bordered on the west by an ephemeral creek with a smaller creek bisecting the ridge from the highest point in the northwest corner. The ridgetops are relatively flat dropping off steeply into the ephemeral drainages. To the south, the tract slopes into the Buffalo National River. The ephemeral creeks flow directly into the Buffalo River.

Two abandoned trails penetrate the tract from the north and run along the ridgetops. No grazing or timber harvesting is evident. The tract is fenced on the north and west. There is evidence of historical fires.

Vegetation There are two plant communities on the Buffalo River tract. The ridges and upper slopes are covered by Dry Mesic Woodland, and the lower slopes and creek beds support Dry-mesic Alkaline Forest. The creeks are too small to develop a true riparian vegetation. Both of these plant communities were judged to be of very high quality. Trees were tall (to 80') with diameters commonly over two feet and many individual shortleaf pine and white oak were over three feet. The overstory trees were 80 - 100 years old. Small seepage areas are located along the creekbeds. High quality examples of these communities are considered uncommon to rare in Arkansas. No caves were located.

The Dry- mesic Slope Woodland covers 82% of the tract and is dominated by shortleaf pine (*Pinus echinata*), white oak (*Quercus alba*) and northern red oak (*Quercus rubra*). It is a medium to tall (to 80') closed canopy woodland with variable amounts of sourgum (*Nyssa sylvatica*), post oak (*Quercus stellata*), and black oak (*Quercus velutina*). The understory is sparse under the mature woodland and dominated by flowering dogwood (*Cornus florida*), many of which have been killed by blight. The groundcover is variable, depending on crown openings, and varies from 0 - 25%.

The Dry-mesic Alkaline Forest covers 18% of the tract on the lower slopes and bottoms of the small ephemeral streams. The canopy on this closed forest is closed and dominated by white oak (*Quercus alba*), and northern red oak (*Quercus rubra*) with varying amounts of chinkapin oak (*Quercus muehlenbergii*) and a few shortleaf pine (*Pinus echinata*). The shrub stratum is thick with saplings of the overstory trees. The groundcover is 20 -50% depending on crown closure.

Wildlife Although a complete wildlife survey was not completed, a total of 24 wildlife species were observed on the tract. A total of 19 bird species were observed, including eastern wood-pewee and red-eyed vireo, both neotropical migants. The tract has the potential to support a broad suite of forest interior breeding songbirds.

Special Status Species No species of special concern were located on the Buffalo River tract during this survey. However, the Ozark shiner (*Notropis ozarkansis*) occurs in the adjacent Buffalo River. The Ozark shiner is a fish endemic to the Ozarks which is being tracked by the Arkansas Natural Heritage Commission. This fish is relatively common in Ozark Highland rivers with high water quality. It has declined throughout its range due to the construction of river impoundments.

Point Peter Tract

General The Point Peter tract is located in the Boston Mountains section of the Ozark Highlands and border the Ozark National Forest to the west.

The tract is bisected by an ephemeral creek that drains into Richland Creek, a tributary of the Buffalo River. Sandstone underlies the tract with outcrops and surface rock exposed. Slopes range from 5% to 15%. A 4-wheel drive dirt road is being maintained across the eastern portion of the tract. No grazing or timber harvesting is evident. The tract is not fenced. There is evidence of historical fires on the ridgetop.

Vegetation Four plant communities were recorded at the tract.

The Dry Woodland community covers 9% of the tract. It is dry, open, short (up to 30') and strongly dominated by post oak (*Quercus stellata*). This community occurs in the northeast corner of the tract and is intermixed with the white oak woodland on very shallow soils. The understory is thick with shrubs and seedings of the overstory species. Lichens and mosses are abundant.

The Wooded Herbaceous Vegetation community covers less than 1% of the tract. This open-xeric oak - sandstone glade community occurs as a series of very small discontinuous outcrops throughout the tract. Stunted, xerophytic oaks up to 20' tall grow above an herbaceous layer dominated by grasses less than 2' high. Herbaceous cover is 100% except where boulders and pavements of exposed sandstone occur. Blackjack oak (*Quercus marilandica*), post oak (*Quercus stellata*) and black oak (*Quercus velutina*) dominate.

Dry Woodland dominates this tract (60% cover). This woodland has a relatively open canopy with medium - tall trees (up to 50'), primarily mixed oaks. This community is located on the mid- and upper slopes above the drain and below the ridge top. The soils are shallow and well-drained with sandstone outcrops and scattered rocks. Mosses and lichens are abundant.

The Dry-mesic Slope Woodland encompasses 31% of the tract. It is a dry-mesic, medium-tall (to 65'), closed canopy woodland occuring along the lower slopes and upper drains. White oak (*Quercus alba*) and northern red oak (*Quercus rubra*) dominate the community with variable amounts of sourgum (*Nyssa sylvatica*). Flowering dogwood (*Cornus florida*) is common. The understory and herbaceous layers range from thick with blueberry species to sparse with scattered juneberries, depending on the canopy cover.

Wildlife Although the tract was not specifically surveyed for wildlife a total of 50 species were identified on the tract. This included a large number of butterfly species (15) and 30 bird species. Of the bird species, many were neotropical migratory birds. Some of the species identified are of high regional conservation concern due to declining populations, including Worm-eating Warbler and Kentucky Warbler.

Special Status Species Two special status species were found on this tract. Both of these plants are listed by the State Heritage Program, although neither are listed by the federal government.

Ozark chinquapin (*Castanea pumila* var. *ozarkensis*) is an Interior Highlands endemic taxa growing in dry woodlands. This tree has been severely reduced in range and stature due to an introduced non-native fungus. It is currently found only as root sprouts that seldom produce seeds. Although the tree fruits in the fall, no old fruits were found on the three clones found on the 80-acre tract nor on the 10 clones found on the 40-acre tract.

Moore's larkspur (*Delphinium newtonianum*) is a globally rare Interior Highlands endemic plant known from only five counties in Arkansas. The larkspur grows in the shade of rich forests. Thirty-five plants were found along the base of a steep slope on the 80-acre tract. There is a road through the middle of that population.

Calf Creek Tract

General The Calf Creek tract is located in the Boston Mountains east of the Ozark National Forest. The tract is situated on a south-trending ridgeline with a nearly flat ridge-top. The topography is rugged with slopes 10% to 30% common and many vertical bluff lines. There is a road which runs along the ridgeline. There is no evidence of recent timber cutting on the tract, nor is the tract fenced. There is evidence of past fires on the ridgeline. A windstorm in 1999 blew down many trees, especially along the bluff lines on the east side of the tract. The tract is within the Buffalo River Watershed. The Buffalo River is designated a National River.

Six plant communities were identified on the tract. These communities closely follow the aspect and slope.

Dry Woodland covering 10% of the Calf Creek tract is strongly dominated by post oak *(Quercus stellata)* with occasional shortleaf pine (*Pinus echinata*). It is a dry, open, relatively short (up to 30') woodland found on the upper ridge. The understory is thick with shrubs and saplings of the overstory trees. Lichens and mosses are abundant.

Wooded Herbaceous Vegetation covers less than 1% of the tract. This open, xeric oak-sandstone glade community occurs in a series of very small, discontinuous outcrops throughout the tract. Stunted oaks (up to 20') grow above a herbaceous layer dominated by grasses less than 2' tall. Herbaceous vegetation cover is 100%, except where boulders and pavements of exposed sandstone occur. Scattered overstory species are primarily mixed oaks: blackjack oak (*Quercus marilandica*), northern red oak (*Quercus rubra*), post oak *(Quercus stellata)*, and black oak (*Quercus velutina*).

The Dry Slope Woodland covers 14% of the tract. This is a dry, medium canopy (up to 40%) shortleaf pine/oak woodland occurring along the rock upper south to southwest facing slopes. The woodland canopy is open, dominated by shortleaf pine (*Pinus echinata*) topping abundant post oak (*Quercus stellata*) and northern red oak (*Quercus rubra*). Herbaceous coverings are variable 25% - 50%, depending on crown closure and fire history.

The Dry-mesic Slope Woodland covers 61% of the Calf Creek tract. It is a dry-mesic woodland with trees up to 50' and closed canopy. White oak and northern red oak are strongly dominant with variable amounts of sourgum (*Nyssa sylvatica*), shortleaf pine (*Pinus echinata*) and black oak *(Quercus velutina)*. The understory is sparse under mature trees and dominated by flowering dogwood *(Cornus florida)* and the saplings of the overstory trees. In other areas, the understory is thickly dominated by wild blueberries (*Vaccinium* sp.) and juneberries (*Amelanchier* sp.). The herbaceous layer is variable, 0% - 25% depending on the crown openings.

The Mesic Ravine Forest covers about 6% of the tract along the bottoms and lower slopes of Calf Creek. This is a tall (up to 80') closed canopy forest community with diverse species composition. The creek is ephemeral to intermittent. The canopy is dominated by northern red oak (*Quercus rubra*). Other species include sweetgum (*Liquidambar styraciflua*), white oak (*Quercus alba*), black oak (*Quercus velutina*) and American elm (*Ulmus americana*). Ferns are common within this community.

The Mesic Lower Slope Forest covers 15% of the tract along the lower section of the east-facing slope and bluffline along the eastern edge of the tract. The tract is dominated by sugar maple (*Acer saccharum*), shagbark hickory (*Carya ovata*), white ash (*Fraxinus americana*), black walnut (*Juglans nigra*), and bitternut hickory (*Carya cordiformis*). This community is relatively rare, and this site was judged to be of medium quality.

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Wildlife Although not specifically surveyed for wildlife, a total of 44 species were recorded. Most notably, 25 bird species were recorded, many of them neo-tropical migratory birds. Several birds are of regional conservation concern due to declining populations, including worm-eating warbler and Kentucky warbler.

Special Status Species Two special status plant species were recorded at Calf Creek.

Ozark chinquapin (*Castanea pumila* var. *ozarkensis*) is an Interior Highlands endemic taxa growing in dry woodlands. This tree has been severely reduced in range and stature due to an introduced non-native fungus. It is currently found only as root sprouts that seldom produce seeds. Although the tree fruits in the fall, no old fruits were found on the twenty clones found on the tract, although some of the clones were quite large.

Moore's larkspur (*Delphinium newtonianum*) is a globally rare Interior Highlands endemic plant known from only five counties in Arkansas. The larkspur grows in the shade of rich forests. Fifty plants were found in two locations in the Mesic Lower Slope Forest at Calf Creek.

Campbell Hollow Tract

General The Campbell Hollow tract encompasses a flat ridgetop which falls away steeply into Campbell Hollow and Calf Creek. The geologic substrate is sandstone with extensive rock outcrops and bluff lines. The topography is rugged with a series of five vertical bluff lines separated by narrow benches covering most of the tract. Slopes range from 5% to 25%. The flat southeastern portion of the tract was apparently cleared in the past and supports a native grass pasture. The remaining portions of the Campbell Hollow tract are undisturbed. There is no evidence of recent logging, or grazing. There are no roads or trails on the tract. There is evidence of fire within the last 20 years.

Vegetation Five plant communities were found on the Campbell Hollow tract.

The Wooded Herbaceous Vegetation covers less than 3% of the tract. This open, xeric oak sandstone glade community occurs as a series of very small discontinuous outcrops throughout the tract. Various stunted oak species dominate, including chinkapin oak (*Quercus marilandica*), northern red oak (*Quercus rubra*), post oak (*Quercus stellata*), and black oak (*Quercus velutina*). Herbaceous cover is 100% except where precluded by rock outcrops.

The Dry Slope Woodland covers 8% of the tract. This common shortleaf pine - oak woodland is found along the edge of the rocky bluff line. The vegetation is open forest with shortleaf pine (*Pinus echinata*) overtopping abundant post oak (*Quercus stellata*) and northern red oak (*Quercus rubra*).

Dry Woodland covers 15% of the tract on the nearly flat southeastern portion of the tract. It is dominated by post oak (*Quercus stellata*) with occasional shortleaf pine (*Pinus echinata*).

The shrub layer is thick in areas and the herbaceous layer varies from quite sparse to moderately dense. Lichens and mosses are abundant.

The Acid Forest community encompasses 44% of the Campbell Hollow tract, including most of the benches along the west and northwest facing slopes. The overstory trees are tall (up to 80') and species diversity is high. White oak (*Quercus alba*) and northern red oak (*Quercus rubra*) dominate the canopy with a rich mix of sugar maple (*Acer saccharum*), various hickories, white ash (*Fraxinus americana*), sweetgum (*Liquidambar styraciflua*), sourgum (*Nyssa sylvatica*) and chinkapin oak (*Quercus muehlenbergii*). This community is considered rare in Arkansas and this example was judged to be of high quality, due to the lack of intrusions and integrity of the species composition and community structure.

The Mesic Lower Slope (Ravine) Forest covers the western 30% of the tract. This is a mesic, closed canopy forest community. Trees are tall (up to 80') and the species composition is diverse. Northern red oak (*Quercus rubra*) dominates, but white oak (*Quercus alba*), white ash (*Fraxinus americana*), sweetgum (*Liquidambar styraciflua*), and chinkapin oak (*Quercus muehlenbergii*) are also prevalent. The midstory and shrub layers are also diverse. This plant community is considered rare in Arkansas. This example was judged to be of high quality, due to the lack of intrusions and the integrity of the species composition and community structure.

Wildlife Although this tract was not specifically surveyed for wildlife species, a total of 41 species were noted, including 27 bird species. The majority (16) were neo-tropical migratory birds. Some of these are regional species of concern, including worm-eating warbler and Kentucky warbler.

Special Status Species Moore's larkspur (*Delphinium newtonianum*) is a globally rare Interior Highlands endemic plant known from only five counties in Arkansas. The larkspur grows in the shade of rich forests. More than 2,000 plants were found on the lower slopes and benches of the Campbell Hollow tract.

Bear Creek Tract

General The Bear Creek tract encompasses a portion of a flat ridgetop with the majority of the tract falling steeply away in a series of bluffs and very steep slopes (up to 45%) to within 1/4 mile of Bear Creek. The tract is bisected by an ephemeral creek flowing west to east. There has been some pasture conversion on the ridgetop and some logging on the lower slopes of the southeast portion of the tract within the last 50 years. However, the majority of the tract is undisturbed and plant communities are largely intact. There is evidence of fires within the last 20 years.

Vegetation There are six plant communities on this complex tract.

The Dry Woodland community covers 11% of the tract along its western edge. It is a dry, open, relatively short (up to 30') woodland strongly dominated by post oak (*Quercus stellata*) and northern red oak (*Quercus rubra*). Lichens and mosses are abundant.

The Wooded Herbaceous Vegetation covers less than 1% of the tract. This open, xeric oak-sandstone glade community occurs in a series of very small discontinuous outcrops within the post oak woodland. Trees are small (up to 30') and the herbaceous layer is dominated by grasses less than 2' high, except where precluded by boulders and exposed sandstone.

The Dry-mesic Slope Woodland covers 13% of the tract mid way on the south facing aspect. This is a dry-mesic, medium-tall (to 70'), closed canopy woodland strongly dominated by white oak (*Quercus alba*) and northern red oak (*Quercus rubra*) with variable amounts of sourgum (*Nyssa sylvatica*), southern red oak (*Quercus falcata*) dominant on shale exposures, and black oak (*Quercus velutina*).

The Acid Forest covers 36% of the tract, primarily on the north-facing slope. The stand is dominated by a closed-canopy mixed hardwood forest. Trees are tall (up to 80') and the overstory is diverse. Dominant species are white oak (*Quercus alba*) and northern red oak (*Quercus rubra*). High quality examples of this plant community are considered rare in Arkansas, and the Bear Creek tract Acid Forest is considered high quality because it shows little change from historical species composition and virtually no intrusions.

The Mesic Lower Slope (Ravine) Forest covers 17% of the tract in the northern half of the tract. The trees are tall (up to 80') and species composition is diverse. The canopy is dominated by northern red oak (*Quercus rubra*), but sweetgum (*Liquidambar styraciflua*), white oak (*Quercus alba*), chinkapin oak (*Quercus muehlenbergii*), and American elm (*Ulmus americana*) are also present. Ferns are common. High quality examples of this plant community are considered rare in Arkansas, and the Bear Creek tract Mesic Lower Slope (Ravine) Forest is considered high quality because it shows little change from historical species composition and virtually no intrusions.

The Mesic Lower Slope Forest covers 17% of the Bear Creek tract. It is located on the lower more gentle slopes at the eastern edge of the tract and follows the ephemeral creek drainage. The canopy is diverse with sugar maple (*Acer saccharum*), bitternut hickory (Carya cordiformis), white ash (*Fraxinus americana*), magnolia (*Magnolia acuminata*) in the ravine, black walnut (*Juglans nigra*), basswood (*Tilia americana*), and American elm (*Ulmus americana*) also present. There is a wide variety of shrubs and forbs also found on this tract. High quality examples of this plant community are considered rare in Arkansas, and the Bear Creek tract Mesic Lower Slope Forest is considered high quality because it shows little change from historical species composition and virtually no intrusions.

Wildlife Although this tract was not specifically surveyed for wildlife species, a total of 43 species were noted, including 28 bird species. A good number of the birds observed were neo-tropical migratory birds. Some of these are regional species of concern, including worm-eating warbler and Kentucky warbler. Black bear sign was also observed on this tract.

Special Status Species Suitable habitat existed on the Bear Creek tract for six special status, however none were recorded.

Middle Fork Tract

General The Middle Fork tract is on a moderately east /northeast facing slope above an intermittent branch of the Middle Fork of the Little Red River. The tract is bisected by two ephemeral drainages. Sandstone rock outcrops occur along all of the drainages and in scattered areas throughout the tract. The topography is moderate with 10% slopes, except in the northeast corner where the land drops very steeply to Middle Fork Creek. There are no roads and no evidence of fire on the tract. There is no evidence of recent logging, however the tract appears to have been cutover in the past, and the trees are small and 30-40 years old.

Vegetation There are four plant communities on the Middle Fork tract.

Mesic-dry Slope Woodland covers 70% of the Middle Fork tract. It is a dry-mesic closed canopy woodland occurring on the east facing slopes above the drainages. White oak (*Quercus alba*) and northern red oak (*Quercus rubra*) dominate the community with variable amounts of hickory (*Carya* sp.) and sourgum (*Nyssa sylvatica*) and black oak (*Quercus velutina*). The understory is sparse under mature woodland. Herbaceous cover is variable 0% - 25% depending on canopy closure. The community is of low quality with trees 30-40 years old, averaging 15" diameter and 40' tall.

The Wooded Herbaceous Vegetation covers less than 4% of the tract. This is an open, xeric oak - sandstone glade community which occurs as one large and several small discontinuous outcrops throughout the tract. A few oaks (post oaks) grow above the herbaceous layer dominated by grasses less than 2' high. Juneberries (*Amelanchier* sp.) and wild blueberries (*Vaccinium* sp.) make up the shrub layer. This area has been recently grazed and is considered to be of low quality for native plants.

The Acid Forest covers 29% of the tract, primarily on the lower slopes and smaller drainages. The trees are moderately tall (up to 70'), the overstory is diverse and the canopy is closed. Northern red oak (*Quercus rubra*) and white oak (*Quercus alba*) are dominant. This community is of medium quality. Trees are 30-40 years old, average 15" in diameter and 50' tall. The herbaceous layer is very sparse.

The Mesic Lower Slope (Ravine) Forest covers 8% of the tract. This closed canopy forest occurs along the bottoms and lower slopes of the large ephemeral creek. Trees average 40 years old, 60' tall, 20 diameter, and species composition is diverse. The canopy is dominated by northern red oak (Quercus rubra), other species include sweetgum (*Liquidambar styraciflua*), white oak (*Quercus alba*), chinkapin oak (*Quercus muehlenbergii*), and American elm (*Ulmus americana*). Ferns are common. This community was considered to be of medium quality.

Wildlife Although this tract was not specifically surveyed for wildlife species, a total of 36 species were noted, including 23 bird species. A good number of the birds observed were neo-tropical migratory birds. Some of these are regional species of concern, including worm-eating warbler and Kentucky warbler. Beaver sign was evident along the creek.

Special Status Species No special status plants or animals were observed at the Middle Fork tract.

Drasco Tract

General This small tract is just north of State Road 92. The topography is hilly with 12% slopes. The tract is completely wooded with evidence of some recent tree cutting. An old road runs through the tract which is fenced on the south and west sides. The tract is grazed. A low intensity fire swept through this area in the late 1980's. The tract is surrounded by converted pasture and similar lower quality woodlands.

Vegetation One plant community was recorded on this tract, and it is of low quality. The Dry-mesic Slope Woodland has older trees, including sourgum (*Nyssa sylvatica*) averaging 50' tall, 12"-15" diameter, and 35-45 years old. The shortleaf pine (*Pinus echinata*) are younger and there is evidence of logging in the past. Other species include various oaks, hickories and white ash (*Fraxinus americana*).

Wildlife No wildlife species were specifically noted on the Drasco tract.

Special Status Species No special status plants or animals were observed at the Drasco tract. The longnose darter is found in the Little Red River system of which the unnamed ephemeral creek is a tributary, but no appropriate habitat existed on the Drasco tract.

Locust Mountain Tract

General The Locust Mountain tract topography is very steep with sheer bluff lines over 25% of the tract and steep slopes (25% slope) over the remainder of the tract. There is a deep entrenched stream in the northwest corner of the tract. There is no evidence of recent timber harvest and no roads. A minor amount of cattle grazing has occurred around the southeast corner where the fence is down. Fire scars are found on most of the larger trees on the east side of the tract.

Vegetation Four plant communities were delineated on the tract. The plant communities on the Locust Mountain tract are relatively widespread in the Boston Mountains, but rarely are they of as high quality. Portions of the tract are in near natural condition with most ecosystem processes intact.

The Dry Woodland community covers 21% of the Locust Mountain tract. It is a dry, open relatively short (up to 25') woodland strongly dominated by post oak (*Quercus stellata*). This community occurs on dry ridge lines and areas of shallow soils surrounding sandstone glades. Lichens and mosses are abundant. This is a rare high quality example of this plant community.

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The Sandstone Glade plant community covers 3% of the tract. This open, xeric oak - sandstone glade community occurs in a series of small, linear strips and discontinuous outcrops throughout the tract. Stunted oaks (up to 20' tall) grow above a herbaceous layer dominated by grasses less than 1 meter high. Tree canopy species include blackjack oak (*Quercus marilandica*), post oak (*Quercus stellata*), and black oak (*Quercus velutina*). Herbaceous cover is 100%, except where exposed sandstone occurs.

Dry-mesic Slope Woodland occurs on 53% of the tract. This relatively open to closed woodland occurs on the north facing slope above a ravine. White oak (*Quercus alba*) and northern red oak (*Quercus rubra*) share dominance with variable amounts of black oak (*Quercus velutina*) and other species. This community was rated as medium quality.

Mesic Ravine Forest covers 13% of the tract. This is a mesic, closed canopy forest community in the bottoms and lower slopes of the steep sided ravine. The trees are tall (up to 80') and the species composition is diverse. The creek is intermittent and the bluff lines are seepy after rain events. The canopy is dominated by northern red oak (*Quercus rubra*) with white oak (*Quercus alba*), American elm (*Ulmus americana*) and sweetgum (*Liquidambar styraciflua*) also common. Numerous fern species were recorded. This community was rated as high quality.

Wildlife Although this tract was not specifically surveyed for wildlife species, a total of 37 species were noted, including 22 bird species. A good number of the birds observed were neo-tropical migratory birds. Some of these are regional species of concern, including Louisiana waterthrush, worm-eating warbler and Kentucky warbler. Red bat (*Lasiurus borealis*) was observed on the tract.

Special Status Species Suitable to marginal habitat existed on the Locust Mountain tract for four special status plant species, however none were recorded.

West Fork Tract

General This small tract is located on a moderately steep (20%) south-facing slope south of the Gulf Mountain Wildlife Management Area managed by Arkansas Game and Fish Commission. It is surrounded by private land. Commercially owned timber land was recently clear-cut to the west. The tract is completely wooded with no evidence of recent logging, grazing or roads, although a fireline has been constructed around the commercial clear-cut to the west. The oldest post oaks have fire scars.

Vegetation The entire tract is covered by Dry slope Woodland. This plant community is dominated by shortleaf pine (*Pinus echinata*) with abundant post oak (*Quercus stellata*). The understory is very open with herbaceous cover varying from 25% to 50% depending on canopy closure. This medium quality example of a community is wide-spread in the Ozarks.

Wildlife No specific wildlife were noted on the West Fork tract. There are no habitat features that would indicate unique or particularly productive wildlife habitat.

Special Status Species No special status species were recorded on the West Fork Tract.

Redlands Mountain Tract

General The Redlands Mountain tract encompasses a steep south-facing slope and ridgeline that flattens out somewhat at the northeast corner. The topography is steep with 40% slope on half the tract, and 20% or less on the lower slopes and ridgetop. Small rocky drainages form along the lower slope and a slightly larger ephemeral drainage runs west from the ridgeline. There is no evidence of recent logging. An ATV trail runs along the crest of the ridgeline. Fire scars were found on most larger trees, but there is on evidence of recent fires. Die-back of woody plants and trees in the glades was evident, probably due to drought conditions.

Vegetation Four plant communities were delineated on this tract.

The Novaculite Ridgetop Woodland covers 12% of the tract along the main ridge. It is an open, short (up to 25') woodland by northern red oak (*Quercus rubra*) and black hickory (*Carya texana*). It is associated with novaculite outcrops. This plant community is endemic to the Ouachita Mountains Ecoregion. Although similar habitat exists on the Ouachita National Forest to the north, high quality examples like the Redland Mountain tract are considered rare.

The Novaculite Glade Wooded Herbaceous Vegetation covers 40% of the tract primarily in the southern half. It is an open, xeric forest of dwarfed blackjack oak (*Quercus marilandica var. ashei*) and winged elm (*Ulmus alata*) growing 6' to 12' high. Herbaceous cover is 100% except were bare rock is exposed and lichens cover 40% - 70% of exposed rock surfaces. This plant community is endemic to the Ouachita Mountains Ecoregion. Although similar habitat exists on the Ouachita National Forest to the north, high quality examples like the Redland Mountain tract are considered rare.

The Dry South-slope Woodland plant community covers 41% of the tract. It is a dry open woodland growing to 60' occurring on the upper and lower south-facing slopes. The dominant canopy tree is shortleaf pine (*Pinus echinata*) with variable diversity and density of oaks, including black oak (*Quercus velutina*) and blackjack oak (*Quercus marilandica*). This plant community is medium quality.

The Dry-mesic Slope Woodland community covers 7% of the tract on a north-facing slope above a drainage. Trees grow to an average of 50', including white oak (*Quercus alba*) and northern red oak (*Quercus rubra*) with variable amounts of shortleaf pine *(Pinus echinata*). In some areas, large shortleaf pine form the overstory. The largest pines were 30" in diameter and were aged at over 87 years old. The largest white oak was over 100 years and the largest northern red oak was aged at over 54.

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Wildlife Although this tract was not specifically surveyed for wildlife species, a total of 48 species were noted, including 31 bird species. Twenty of the bird species observed were migratory song birds.

Special Status Species The Rufous-crowned sparrow (*Aimophila ruficips*) is listed as rare by the Arkansas Natural Heritage Commission. It was not found during the pre-breeding season site visit, but appropriate habitat occurs on the tract, and this species has been found on the tract during the non-breeding season.

The Ouachita hedyotis (*Hedyotis ouachitatana*) is a Ouachita Mountains endemic plant listed as rare by the Arkansas Natural Heritage Commission. Over 50 individuals were found scattered in open woodland along the ridge-top and south slope. This species is widespread in dry woodlands and glades throughout the southern and western Ouachita Mountains.

Louisiana

Air Quality and Climate

In general the climate in Louisiana is subtropical. Summers are warm to hot and the winter months are cool and interspersed with balmy, warmer days. Daytime humidity in the summer averages 60%. Annual precipitation is between 50 to 55 inches per year and occurs primarily in the summer months as thunderstorms. Periods of long steady rain may occur during the winter and spring months; however, they are infrequent. Snowfall in Louisiana would occur primarily in the northern part of the state with accumulations being one inch or less.

The tracts in Louisiana are in a rural setting, with production of agricultural crops and/or forest products being the largest industries in the parishes. For this reason there are no major sources of air pollutants in the area of the tracts, and they are not to be located in a nonattainment area for the six criteria air pollutants designated by the Environmental Protection Agency: sulphur dioxide, nitrogen dioxide, carbon monoxide, ozone, hydrocarbons, and particulates.

Cultural Resources

The four public domain tracts in Louisiana have not been surveyed for historic properties or for cultural resources. These tracts have a potential for sites of human occupation. Some of these sites may have significant values and be eligible for listing on the National Register of Historic Places.

Evidence of human occupation in Louisiana has been dated from the paleolithic period. These sites are few but are very important. Recent research has revealed that some of the great engineering efforts of mounds and earthworks probably began during the Archaic Period, much earlier than previously suspected. Historic Native American occupation sites reveal information from one of the most tumultuous times in all of North American history. The potential exists for historic properties or other cultural resources to be on one or more of these tracts.

Minerals

Two of the tracts are productive for fluid minerals and are considered to have high potential for additional development. While the potential exists, the current holder of rights has shown no inclination to develop any of the deeper potential. It is reasonable to expect this to be the situation for the foreseeable future.

The other two tracts have a high potential for development. While the potential exists, it is for deeper formations than have been explored for so far. No interest has been shown in developing any of the deeper potential. It is reasonable to expect this to be the situation for the foreseeable future. Additional information can be found in Appendix B.

Recreation and Visual Resources

Recreation The tracts in Louisiana would be classed as being in a "rural" environment (Appendix C). The activity most likely to occur on these tracts would be dispersed recreation such as hunting. Fishing may occur on the Black Lake tract in Black Lake since it is mostly inundated by Black Lake Reservoir. The broad setting, including the privately owned land adjacent to the tracts, would be that resource modification and utilization practices are obvious and the sights and sounds of human development are apparent. These modifications and utilization practices would be less apparent on the Duck Lake tract since it is a wetland area. However, oil and gas development has occurred in the vicinity of the tract and it is included in a oil and gas unit agreement. There are no developed recreational sites or trails on any of the tracts in Louisiana.

The Big Saline Bayou tract has an all weather road that crosses the northwest corner of the tract and provides access to the Big Saline State Wildlife Management Area which is north of the tract. There is also a road that runs in an east west direction in the northern third of the tract and a road that runs in a north-south direction on the west boundary to the tract. These roads were built in conjunction with mineral development on the tract.

Visual Resources The topography of the tracts and in the region of the tracts in Louisiana is generally level. Individuals visiting the tracts wouldn't be able to see more than a few hundred feet in a given direction because of the vegetation. Sight distance may be greater on the Duck Lake tract because the vegetation consists of marsh grass and widely spaced trees. The visual resource on the Rocky Bayou, Black Lake and Big Saline Bayou tracts would consist of second growth upland forest (Rocky Bayou) to bottomland hardwood forest (Black Lake and Big Saline Bayou). Though water is visible from the Black Lake tract it is forested and not open water. Modifications to the visual resource such as the construction of roads, residences or mineral development would be apparent to individuals visiting the tracts. The visual resource on the Duck Lake tract would consist of marsh grass, scattered wetland adapted trees and open water (Duck Lake). There have been modifications to the visual resource in the vicinity of the tract as a result of mineral development. These modifications include construction of pipelines and canals for drilling and maintaining production facilities. The visual resources found on the tract itself have not been modified to the best of our knowledge. Additional information on the classification of visual resources is found in Appendix C.

Soils

Specific soils on the tracts are shown in Table 3-4. A description of these soils is in Appendix D.

Table 3-4. Soils on the Louisiana Tracts

Tracts	**Soils**
Rocky Bayou (Desoto Parish)	Sacul fine sandy loam, 12-30% slopes (dominate soil), Moreland Clay
Black Lake (Natchitoches Parish)	Guyton Silt Loam Frequently Flooded (dominate soil), Yorktown Clay, Frequently Flooded, and Gore Silt Loam
Big Saline Bayou (Rapides Parish)	Foley Silt Loam (dominate soil), Gore very fine sand loam
Duck Lake (St. Martin Parish)	Fausse Series

Water Quality, Surface and Ground

The primary elements tested for by the U.S. Geological Survey when doing water quality sampling are: Total Dissolved Solids, Hardness (calcium carbonate), Nitrate as nitrogen, Chloride and Iron. The maximum permissible contaminant level of these elements for human consumption are: 500 milligrams/liter (mg/l) for Total Dissolved Solids, (no measure available for hardness), 10 mg/l for Nitrate, 250 mg/l for Chloride and 300 mg/l for Iron (National Water Summary 1986).

The tract in Desoto Parish is underlain by the Carrizo-Wilcox Aquifers; the tract in Natchitoches Parish is underlain by the Alluvial Aquifers; the tract in Rapides Parish is underlain by the Pleistocene-Miocene Aquifers; the tract in St. Martin Parish is not underlain by a principal aquifer (National Water Summary 1986). Fresh water in the Carrizo-Wilcox Aquifers typically contains a soft, sodium bicarbonate type water. The groundwater in the Alluvial Aquifers is limited to industrial and agricultural use because of excessive concentrations of dissolved solids, hardness, iron or localized salinity. Water in the Pliocene-Miocene Aquifers is generally not suitable for public supply because of high concentrations of fluoride and color. There are no areas in the southern portion of St. Martin Parish where freshwater occurs at any depth (National Water Summary 1986).

According to U.S. Geological Survey, the Big Saline Bayou tract is in an area with potential for contamination resulting from human activity. None of the other tracts was identified as having other than naturally occurring contaminants (National Water Summary 1986).

No water quality samples were taken of water in the intermittent stream on the Rocky Bayou tract or the wetland areas present on the other tracts in Louisiana. However, because of the rural setting in which the tracts are located, lack of development - either industrial or agricultural on or in close proximity to the tracts, the possibility of contamination of surface water from human activity would be low.

Wetland/Riparian Zones

In Desoto Parish, the head of Rocky Bayou is located just south of the Rocky Bayou tract and flows in a northerly direction through the tract. In this area Rocky Bayou is considered to be an intermittent stream. No wetland or riparian areas were observed or associated with this intermittent stream channel.

The Big Saline Bayou Tract in Rapides Parish is flooded for approximately three to four months of the year by Big Saline Bayou. The Bayou runs along the north and east boundaries of the tract. Both hydric soils and vegetation are present therefore, the tract would classed as a forested wetland.

In Natchitoches Parish the Black Lake tract is mostly inundated by Black Lake reservoir. With the exception of a small part of the tract located on the east side of the northern most parcel and the north boundary of the south parcel, the tract would be classed as a Palustrine, Forested Wetland.

In St. Martin Parish, two types of wetland areas may be found on the Duck Lake Tract. Where trees are present it would be classed as Palustrine, Forested Wetland. Where trees are absent or sparse it would be classed as a Palustrine, Emergent Wetland area; frequently or permanently flooded.

Table 3-5. Water Resources on the Louisiana Tracts

Tracts	**Water Quality Surface/Ground**	**Wetlands/Riparian Zones**
Rocky Bayou (Desoto Parish)	An unnamed drainage flows through the tract to Rocky Bayou.	The head of Rocky Bayou is located just south of the tract and flows in a northerly direction through the tract. In this area Rocky Bayou is considered to be an intermittent stream. No wetland or riparian areas were observed or associated with this intermittent stream channel.
Black Lake (Natchitoches Parish)	Black Lake is on a part of the tract.	This tract is mostly inundated by Black Lake reservoir. With the exception of a small part of the tract located on the east side of the northern most parcel and the north boundary of the south parcel, the tract would be classed as a Palustrine, Forested Wetland.
Big Saline Bayou (Rapides Parish)	Big Saline Bayou is on north and east sides.	This tract is flooded for approximately three to four months of the year by Big Saline Bayou. The Bayou runs along the north and west boundaries of the tract. Both hydric soils and vegetation are present therefore, the tract would classed as a forested wetland.
Duck Lake (St. Martin Parish)	Surface water at Duck Lake	Two types of wetland areas may be found on the tract. Where trees are present it would be classed as Palustrine, Forested Wetland. Where trees are absent or sparse it would be classed as a Palustrine, Emergent Wetland area, frequently or permanently flooded.

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Federally and State Listed Species

Although all four Louisiana tracts are within the historic range of the Louisiana black bear, the highest potential would be on the Big Saline Bayou tract in Rapides Parish. Recent translocations of females with cubs in the Red River Wildlife Management Area in Concordia Parish may help establish a breeding population in this area of Louisiana. Habitat values on the Big Saline Bayou tract are good, although tempered by the oil and gas development and relatively high visitor use.

Wildlife and Vegetation

The following tract descriptions are based on surveys completed by Dr. Charles M. Allen, with assistance from Sara Thames during the spring of 2000.

Rocky Bayou Tract

General The Rocky Bayou tract is bisected north/south by the upper reaches of Rocky Bayou, a small, deeply incised perennial creek. Terrain varies from a flat bench along the eastern edge of the tract to 20%+ slopes in the drainage. The tract is bordered on the east by a maintained dirt road. Surrounding land use is predominately timber production. Tracts to the south and west were clear-cut about 15 years ago, and there has been some timber cutting on the public tract, including clear cutting along the eastern edge and selective cutting on the interior slopes within the last 10 to 15 years. There are gravel pits to the east of the tract.

Vegetation and Wildlife A total of 185 species of plants were recorded on the Rocky Bayou tract. This high diversity and the relatively intact structure of the tract adds to the regional value of the vegetation community. The bulk of the Destoto Parish tract (estimated at 80%) is mature Hardwood Slope Forest. Although there has been some selective cutting, the species diversity and structure are relatively intact. This Hardwood Slope Forest is dominated by mature American Beech (*Fagus grandifolia*). White ash (*Fraxinus americana*) and American holly (*Ilex opaca*) were also common. The older trees on the site were estimated at 150 to 200 years of age. Given the age of the trees, the canopy was relatively open (50- 60%) probably due to selective logging. Where the canopy has opened the midstory is well-developed with flowering dogwood (*Cornus florida*), hophornbeam (*Ostrya virginiana*), blue beech (*Carpinus caroliniana*), and horsesugar (*Symplocos tinctoria*). A population of pawpaw (*Asimina* sp.) occurs on the east side of Rocky Creek near the southern boundary, and a clump of fragrant sumac (*Rhus aromatica*) grows on top of the ridge east of Rocky Bayou also near the southern boundary. Poison ivy is prevalent throughout the tract.

Approximately 15% of the tract on the flat bench on the eastern edge of the tract is in young 8-12-year-old loblolly pine. The pines are closely spaced and undergoing some self-thinning.

Two small patches of 25-50-year-old mixed loblolly-hardwood forest occur at the northwestern and southwestern corners of the tract. Dominant hardwood species in these areas are southern red oak ((*Quercus falcata*) and water oak (*Quercus nigra*).

This tract is likely to support deer, turkey, squirrel, grey fox and bobcat. The tract is also likely to be particularly valuable for nesting songbirds, despite the surrounding disturbances.

Special Status Species Two special status plant species were identified in the northeast corner of the Rocky Bayou tract, upland forestiera (*Forestiera ligustrina*), an occasionally thorny small tree or shrub, and *Uvularia perfoliata*, an herbaceous perennial. The forestiera population included about 10 clumps within a 40-50-foot-area. The plants were approximately 8-12 feet tall and appeared healthy, although there was no evidence of flower or fruit. The *Uvularia* clump contained about 20 stems, which may have been generated from a single rhizome. The forestiera is listed as S2 by the Louisiana Natural Heritage Commission (S2 = Imperiled in Louisiana because of rarity, (6 to 20 known extant populations) or because of some factor(s) making it very vulnerable to extirpation), and *Uvularia perfoliata* is on the state's Watch List (W5).

Black Lake Tract

General The two sections of the Black Lake tract are on the northwestern shore of Black Lake. Relief is very low with all but the very northwestern tip of the western tract being within 10 feet elevation of the lake surface. Lower portions of the tracts are seasonally inundated by the lake. The western portion of the tract contains a small pond. The surrounding area is utilized by private hunting clubs. There was no evidence of recent logging on the tract.

Vegetation and Wildlife Five vegetation communities were identified on the tract: Swamp Privet-Water Elm Forest, Willow Oak- Overcup Oak Forest, Bottomland Hardwood Forest, Baldcypress Forest, and Loblolly Pine-Hardwood Forest.

The Swamp Privet - Water Elm Forest occupies a band of wetter area of Yorktown clays in the western tract. Most of this area is subject to frequent flooding. This is a large shrub/small tree community with dense clumps of swamp privet with scattered water elms and occasional water locust and baldcypress. The coverage can be nearly 100 percent with the swamp privet clumps, with overall coverage being 70- 80%. There is little or no midstory or understory. Aging these small trees is difficult, but the stand was estimated to be 100+ years old.

The Willow Oak- Overcup Oak Forest occupies most of the eastern tract (80%) and approximately 40% of the western tract. Much of this area is likely to be inundated periodically. This community is relatively open with 50 - 60% canopy coverage. Dominant trees include willow oak (*Quercus phellos*), overcup oak (*Quercus lyrata*), as well as water hickory (*Carya aquatica*), water oak (*Quercus nigra*), sweet gum (*Liquidambar styraciflua*), and green ash (*Fraxinus pennsylvanica*). Larger trees were estimated to be 100 - 150 years old, and ranged up to 90 feet tall, and up to 30 - 37" diameter (dbh) with about 30' spacing. The mid- and understory in this mature community is sparse (20% coverage) with scattered green hawthorne (*Crataegus* sp.), deciduous holly (*Ilex decidua*), lead plant (*Amorpha canescens*), small snowbell (*Styrax americana*), and caric sedges.

The Bottomland Hardwood Forest is restricted to the extreme northwest corner of the western tract. Dominant trees include hackberry (*Celtis* sp.) and slippery elm (*Ulmus rubra*). Trees were approaching 100 years of age. There is a dense midstory/understory (70 -80%) which is predominately silverbell (*Halesia diptera*).

The Loblolly Pine/Hardwoods Forest occurs along the most upland portions of both tracts. Trees were estimated to be 75 -100 years old with 70 - 80% canopy coverage. The hardwood components are similar to those found in the Willow Oak/Overcup Oak community.

Baldcypress occurs along the edge of Black Lake and is scattered on other wetter sites of the tract.

Wildlife The wetland portions of the tract provide wintering habitat for dabbling ducks and foraging/breeding habitat for wood ducks and wading birds. Many migratory songbirds, including prothonotary warbler, Acadian flycatcher, red-eyed vireo, hooded warbler and Kentucky warbler nest in these mature wetland forests.

Special Status Species No special status plants were recorded on the tract, although this was expected as most of the special status plants species in Natchitoches Parish are typically found west of the Red River. No special status wildlife species are expected, although American alligator undoubtedly occur on the site. The species is currently being monitored by the U.S. Fish and Wildlife Service.

Big Saline Bayou Tract

General This tract is bordered on the east and north by the Dewey State Wildlife Management Area and Big Saline Bayou. The tract, like much of this area of Rapides Parish, has been developed for oil/gas production. The tract currently has three federal wells in production. Wells have been placed on raised mounds to avoid being inundated during the winter, and small ponds have been created in the borrow pits. A production facility supporting the federal wells is located just off the southwest corner of the tract. Service roads along the northern and western boundary provide access to the well sites and to a small private inholding to the east along Big Saline Bayou. Considerable dumping has taken place at the tract. The major dumps were removed in 1999, but minor dumping continues and maintenance will be required. The tract is inundated seasonally.

Vegetation and Wildlife Three primary vegetation communities occur on this tract: Swamp Privet-Water Elm, Water Hickory- Nuttall Oak and Baldcypress. The Swamp Privet-Water Elm is primarily located on the western edge of the tract where it forms a dense thicket with 80 -90% coverage. This community occurs in patches throughout the tract in the wetter areas. The age of the swamp privet and water elm is difficult to estimate, but these trees could be 100 years or older. There is no midstory and the understory is primarily grasses and sedges.

The Water Hickory-Nuttall Oak community is scattered throughout the drier portions of the tract, with the heaviest concentrations being towards the southeast. The water hickory appear to be 100 -

150 years old, with the nuttall oaks ranging from 50 to 100 years. Within this vegetation community the canopy is 70 -80%. The midstory is sparse, while the understory consists of small clumps of little snowball (*Styrax americanus*) as well as various grasses and sedges.

Baldcypress is limited to the edges of the Big Saline Bayou and large ponds on the western edge. The trees are estimated to be 150 - 200 years old. Coverage in areas with baldcypress is 60 - 70%. The understory is primarily floating plants, including alligator weed (*Alternanthera philoxeroides*), an invasive exotic, and floating primrose-willow (*Ludwigia peploides*) an invasive native.

The manmade ponds scattered throughout the tract contain floating mats of alligator weed (*Alternanthera philoxeroides*) and floating primrose-willow (*Ludwigia peploides*). Disturbed areas contain clover, vetch, giant ragweed, peppergrass and other grasses. In addition to alligator weed, Chinese tallow (*Sapium sebiferum*), Japanese climbing fern (*Lygodium japonicum*), and Chinaberry (*Melia azedarach*), all invasive exotic plants, are present on the tract.

Wildlife This tract provides wintering habitat for dabbling ducks and foraging/breeding habitat for wood ducks and wading birds. Many migratory songbirds, including prothonotary warbler, Acadian flycatcher, red- eyed vireo, hooded warbler and Kentucky warbler nest in these wetland forests.

Special Status Species No special status plants were recorded on the tract, although *Melanthera nivea*, a plant listed as S2 by the Louisiana Natural Heritage Program was located within a few feet of the southwestern corner of the tract. No special status wildlife species are expected, although American alligator undoubtedly occur on the tract.

Chapter 4
Environmental Consequences

Introduction

This chapter describes the environmental consequences or impacts of implementing each of the alternatives. For analytical purposes, the impact analysis assumes implementation of the proposed decisions and management actions presented in Chapter 2. The analysis is also based on reasonably foreseeable actions which are projected to occur from implementing each of the alternatives. The analysis focuses on the environmental impacts to resources which were presented in Chapter 3.

This analysis identifies direct, indirect and cumulative impacts, both adverse and beneficial. Further review of site-specific proposals, including compliance with the NEPA and other statutory regulatory requirements, will be required.

This discussion is presented by state, and is divided into sections that describe the environmental consequences from implementing each alternative. Mitigating measures designed to avoid or reduce adverse environmental impacts were incorporated into the alternatives and are, therefore, part of the analysis. For the purpose of analysis "short-term" impacts described in this document are those that would last five years or less; "long-term" impacts would last more than five years. The analysis presented in this chapter is based on available information and on the professional judgement of resource specialists preparing this document.

Arkansas

The following environmental elements (see Table 3-1) have been analyzed and are not present and/or will not be affected by selection by any of the alternatives: Areas of Critical Environmental Concern, Coastal Zone Management, Farm Lands (prime or unique), Flood Plains, Environmental Justice, Waste-Hazardous or Solid, Wilderness, Wetland/Riparian Zones, and Wild and Scenic Rivers.

Impacts From Implementing Alternative 1

Reasonably Foreseeable Actions

Anticipated use of the tracts would be limited dispersed recreation, such as hiking and seasonal hunting. The tracts would be available for other unforeseen uses. These may include permits for access, mineral development, or timber harvest. Any development or use proposals would be considered on a case-by-case basis, and would require additional environmental assessment.

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Impacts to Resources

Air Quality and Climate: Use of the tracts under custodial management is expected to be very limited. Any use of motorized equipment would release hydrocarbon emissions. Impacts to air quality could also include generation of fugitive dust from ground disturbance. From the low levels of anticipated use, these impacts would be expected to be minimal.

Cultural Resources: Impacts to historic properties or other cultural sites are not expected with only occasional use of the tracts for hiking and seasonal hunting. For any development or use proposals, additional consideration of possible impacts to historic properties or cultural sites would occur before approval of any proposal.

Minerals: The mineral estate of all tracts has been open to oil and gas leasing or mineral material sales. To date, industry has not shown interest in oil and gas development. Additionally, interest has not been shown in development of surface deposits of rock and other materials. Under this alternative, the mineral estate would remain open and industry could express interest in development of the mineral estate. However, actual development is not expected.

Recreation and Visual Resources: It is expected that there would be no new impacts to the recreational use. Current uses of the tracts for dispersed recreation, such as hunting and hiking, would continue at the current level. An estimate of the Visitor Use Days currently occurring on the tracts was not made because it would have been purely speculative since monitoring of recreational use of the tracts has not been done. However, as previously noted, recreational use of the tracts in Arkansas is limited since the tracts can only be accessed by crossing private property. Therefore, it is assumed recreational use is limited to friends and/or relatives of the adjacent land owners.

No direct, indirect or cumulative impacts to the visual resource associated with the tracts in Arkansas are anticipated under Alternative 1.

Soils: No substantial direct, indirect or cumulative impacts are expected to occur to the soils on the Arkansas tracts. All the tracts are forested and no erosion from either wind or water was observed during the on-site inspection.

A Temporary Use Permit (TUP) was issued for use of an existing road on the Calf Creek tract in 1997. A condition of approval required the permittee to construct water dips to minimize erosion of the road surface. When last inspected the water dips were functioning and no rilling or erosion of the road surface was observed. The TUP is no longer in effect and natural revegetation of the road bed is occurring. BLM plans additional rehabilitation work on the road. This will include seeding portions of the road to augment the natural revegetation.

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Water Quality, Surface and Ground: No substantial direct, indirect or cumulative impacts to water quality, surface or ground, would occur, if this alternative were selected. No water sampling was conducted on the tracts in Arkansas; however, there are currently no known impacts occurring to water quality, surface or ground on any of the tracts.

Federally and State Listed Species: No impacts to Indiana bat or gray bat are expected under this alternative. Extensive logging, which could disrupt potential foraging habitat or Indiana bat roosting habitat, is not expected to occur on the tracts.

Wildlife and Vegetation: No major changes to the wildlife or vegetation composition are anticipated in the foreseeable future under this alternative on the Long Mountain Creek North and South, Foster Branch, Point Peter Mountain, Calf Creek, Campbell Hollow, Bear Creek, Middle Fork, Locust Mountain, West Fork, and Redland Mountain tracts. In the absence of active habitat management, glade communities in particular would continue to degrade due to continuing intrusion by eastern red cedar and the exclusion of fire.

On the Drasco tract, eliminating unauthorized use would permit the reestablishment of an understory on this tract, ultimately improving habitat for wildlife, such as deer and turkey.

Impacts of Implementing Alternative 2

This is the Preferred Alternative for the Middle Fork, Drasco, and West Fork tracts.

Reasonably Foreseeable Actions

The BLM would dispose of the tracts. Title to the land would transfer from the federal government to private individuals, organizations, or local governments. Anticipated use after transfer would include limited dispersed recreation, production of forest products, construction of home sites, hunting camps or cabins, and conversion of ridge tops to pasture.

Impacts to Resources

Air Quality and Climate: Use of the tracts after disposal would include various construction activities that would entail use of mechanized equipment and cause ground disturbance. The use of motorized equipment would release hydrocarbon emissions. In addition, fugitive dust would be generated from areas of ground disturbance. Impacts would be localized and would not be much of an impact to regional air quality.

Cultural Resources: Impacts to historic properties or significant cultural sites are not expected. Before any transfer of management responsibilities or ownership, full consideration of the effect of that action on historic properties or significant cultural sites would take place at that time. A cultural resource survey, if needed, would occur at that time.

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Minerals: Should disposal actions be proposed, a mineral report would be prepared that would identify mineral resources. All tracts have low probability for development of oil and gas. Sale of mineral materials has not occurred, in part, due to the remote location of the tracts and the occurrence of the same material over a broad area. If the mineral report verifies the lack of valuable mineral resources, the mineral estate could be disposed without impacting the public's interest for mineral development.

Recreation and Visual Resources: If the tracts are transferred from federal to private ownership there would be no substantial direct, indirect [illegible] cumulative impacts to the recreational resources and use of the tracts in Arkansas.

There could be direct impacts to the visual resource if forest products are removed from the tracts by the new owner. This impact would consist of the removal of vegetation from the tracts changing the visual resource from a forested landscape to a more open landscape. The degree to which the visual resource would be altered cannot be estimated since the harvest method to be used, such as selective cut verses clear cutting is not known. Similar impacts could occur from pasture conversion and construction activity. Because the tracts are located in sparsely populated rural areas, it is assumed that any change in the visual resource associated with the tracts would only be visible to adjacent land owners and not the general public. Therefore, no indirect or cumulative impacts would be expected to occur.

Soils: If the tracts in Arkansas are transferred from federal to private ownership soils could be directly impacted by the construction of roads to access the tract and the removal of forest products. These impacts would consist of soil compaction, mixing of the soil horizons and erosion where the vegetative cover is removed. These impacts could cause both short term (five years or less) and long term (more than five years) loss of soil productivity. It is assumed if logging occurs on the tracts and the soils surface is exposed, wind and water erosion could occur unless preventive measures are applied. However, this impact would be short term because the area would revegetate naturally at the completion of the removal of forest products. If roads and/or structures are constructed on the tracts, this impact would be long term and would cause a permanent loss of soil productivity. However, this loss of soil productivity would be localized to the affected areas.

No indirect or cumulative impacts to soils are anticipated to occur under this alternative.

Water Quality, Surface and Ground: No substantial direct, indirect or cumulative impacts are foreseen to occur to ground water quality on the tracts in Arkansas if this alternative is selected.

Direct impacts could occur to surface water quality, if the tracts are transferred from federal to private ownership. This impact would result in increased sedimentation, from the clearing of vegetation or forest products, into the intermittent streams adjacent to or on the tracts. At this time, there is no way of knowing if this action would occur or to what extent. These impacts would be short term and localized to areas where vegetation is removed. The degree to which this impact may occur is not known. Direct impacts could be minimized by reseeding disturbed areas at the completion of vegetative removal and leaving vegetative buffers along the intermittent stream channels that occur on the tracts. However, since the tracts would be in private ownership and should this action occur, the BLM would not have authority to say how, when and what measures should be implemented to prevent or lessen sedimentation.

Federally and State Listed Species: Under this alternative, there is the possibility of logging or development on most of the tracts transferred to private ownership. However, difficulties due to terrain would likely preclude logging on much of the Bear Creek and Campbell Hollow tracts. While this has the potential to disrupt foraging habitat, the small size of the tracts and marginal quality of the habitat for Indiana bat and gray bat reduces the potential for adversely impacting these species.

Wildlife and Vegetation: Under this alternative, there is potential to alter the overall species composition in the areas of these tracts. The scope of the impact would depend on the activities taken once the tract left federal ownership.

On the Long Mountain Creek North and South, and Foster Branch tracts, the surrounding use is predominately a pasture and wood lot. Given the topography of the tracts, portions of the tract could be selectively logged, and the ridge tops cleared for additional pasture. It is likely that glade communities on these tracts would continue to degrade as a result of red cedar intrusion and the exclusion of fire.

The surrounding uses of the Calf Creek tract include timber production and scattered home sites. If transferred to private ownership, it is possible, given the proximity of State Highway 377, that the northern portion of the tract could be used as a home site. If that occurred, it could affect the existing populations of Ozark chinquapin (*Castanea pumila var. ozarkensis*).

It is assumed that in private ownership, use of the Campbell Hollow tract would be largely unchanged. Most of the tract is too steep to be successfully converted to pasture. The portion already in pasture could be used as a home site. Use of the lower terraces for trails, etc. could impact the large population of Moore's delphinium (*Delphinium newtonianum*).

In private ownership, wildlife use of the Bear Creek tract is expected to remain unchanged. Most of the tract is too steep for use as a building site. Logging is unlikely because of the lack of access and the expense in this steep terrain. However, if logging were attempted, it would substantially reduce the value of the area for wildlife. Erosion would be very difficult to control and reestablishment of similar plant communities would require many decades.

Wildlife use of the Middle Fork, Drasco, and Locust Mountain tracts in private ownership is expected to remain unchanged.

On the West Fork Tract, in private ownership, there is potential for the construction of a camp or residence. Wildlife use in the area is not expected to be altered by this use.

On the Redland Mountain Tract, in private ownership, approximately ½ of the tract could be expected to be at least selectively logged. Related disturbances, including road construction and staging areas would substantially alter the vegetation community on the lower slopes, reducing canopy cover and prompting release of understory and herbaceous growth. Given the steep slopes and stunted nature of overstory in the glade and ridgetop woodlands, it is unlikely these areas would be harvested.

Impacts of Implementing Alternative 3

This is the Preferred Alternative for the Long Mountain Creek North and South, Foster Branch, Buffalo River, Point Peter Mountain, Calf Creek, Campbell Hollow, Bear Creek, Locus Mountain, and Redland Mountain tracts.

Reasonably Foreseeable Actions

The tracts would be managed in partnership with other agencies and/or organizations. Anticipated uses include limited dispersed recreation and enhancement of existing habitats. Recreation use would be consistent with Recreational Opportunity Spectrum Class - Rural (Appendix C).

Impacts to Resources

Air Quality and Climate: Use of the tracts under this alternative would include recreation and habitat management activities. These uses would involve motorized equipment that would release hydrocarbon emissions. In addition, fugitive dust would be generated from areas of ground disturbance that might be caused by habitat management activities. Impacts would be localized and would not be much of an impact to regional air quality.

Prescribed burning might be used as a habitat management tool. Smoke from prescribed fires can release several "criteria air pollutants" identified by the Environmental Protection Agency. The need for prescribed fires would be evaluated during preparation of an activity plan, and site-specific actions would require a detailed burn plan. Any impacts from prescribed burning would be localized and temporary.

Cultural Resources: Impacts to historic properties or other cultural sites are not expected. Any necessary cultural surveys would be conducted. Additional evaluation of possible impacts to historic properties or cultural sites would occur. Full compliance with applicable laws and regulations would occur before approval of any proposed use and/or action by BLM or a partner.

Minerals: Should partnerships be proposed, during activity planning a mineral report would identify the valuable mineral resources. The valuable mineral rights, such as oil and gas, would remain open to development. A partnership to consider habitat management or recreational opportunities would need to address existing or anticipated mineral development.

Recreation and Visual Resources: There would be no substantial direct, indirect or cumulative impacts to the recreation resource and visual resources. Recreation use would be expected to continue at current levels.

Soils: No substantial new direct, indirect, or cumulative impacts to soils would be expected. Impacts from habitat management actions would be minor, localized and of short duration.

Water Quality, Surface and Ground: No substantial direct, indirect or cumulative impacts to water quality would occur.

Federally and State Listed Species: No impacts to Indiana bat or gray bat are expected under this alternative. Retaining these tracts in public ownership would benefit regional conservation efforts, but are unlikely to substantially affect either bat species.

Wildlife and Vegetation: Active habitat management activities on the tracts would likely include the control of invasive species, use of controlled burning to improve the quality of the fire dependent vegetation communities such as glades, soil stabilization where needed, and monitoring of special status species, particularly plants.

Louisiana

As discussed previously in Chapter 3, the following environmental elements (see Table 3-1) have been considered and are not present and/or will not be substantially affected by selection of any of the alternatives: Areas of Critical Environmental Concern, Coastal Zone Management, Farm Lands (prime or unique), Environmental Justice, Waste-Hazardous or Solid, Wilderness, and Wild and Scenic Rivers. Concerns relative to Flood Plains are addressed as part of the discussion of Wetlands/Riparian Zones. The discussion of Nonnative Invasive Species is part of the Wildlife and Vegetation sections.

Impacts From Implementing Alternative 1

Reasonably Foreseeable Actions

Anticipated use would be limited, dispersed recreation, such as hiking and seasonal hunting. The tracts would be available for other unforeseen uses. These may include permits for access, mineral development, or harvesting of forest products. Any development or use proposals would be considered on a case-by-case basis. Evaluation would include the appropriate level of environmental compliance.

Impacts to Resources

Air Quality and Climate: Use of the tracts under custodial management is expected to be very limited. Any use of motorized equipment would release hydrocarbon emissions. Impacts to air quality could also include generation of fugitive dust from ground disturbance. From the low levels of anticipated use, these impacts would be expected to be minimal.

Cultural Resources: Impacts to historic properties or other cultural sites are not expected. For any development or use proposals, additional consideration of its effect on historic properties or cultural sites would occur before approval of any proposal. Cultural resource surveys would be conducted, if needed.

Minerals: The mineral estate of all tracts has been open to oil and gas leasing and development. Currently, production is occurring from the Big Saline Bayou and Duck Lake tracts. Under this alternative, leasing and development would continue.

Recreation and Visual Resources: No substantial direct, indirect, or cumulative impacts to the recreational resources present and recreational use of the tracts are expected. Current uses of the tracts in Louisiana for dispersed recreation, such as hunting, hiking, or fishing, would continue at the current level. An estimate of the number of Visitor Use Days currently occurring on the tracts was not made since use of the tracts by recreationists has not been monitored and would be purely speculative.

No substantial direct, indirect or cumulative impacts to the visual resource associated with the tracts in Louisiana are expected to occur.

Soils: No substantial new direct, indirect or cumulative impacts to soil productivity on the Louisiana tracts are anticipated.

Water Quality, Surface and Ground: No substantial direct, indirect or cumulative impacts would occur to water quality, surface or ground, if this alternative were selected. There are currently no known impacts occurring to water quality on the tracts in Louisiana.

Wetland/Riparian Areas: No substantial direct, indirect or cumulative impacts would occur to the wetland areas found on the Black Lake, Big Saline Bayou or Duck Lake tracts. The mineral development on Big Saline Bayou occurred in the early 1960s. It is estimated that approximately three acres of the wetland area found on the tract were disturbed at that time. Mounds were constructed on which to place the well heads to prevent them from being inundated during the fall and winter months. No plans were developed in the 1960s which would require the leveling of these mounds at the completion of the production phase of mineral development. However, the disturbed area has stabilized through natural revegetation and no new impacts are anticipated.

Federally and State Listed Species: Louisiana black bear is not expected to be impacted by the planned actions under this alternative.

Wildlife and Vegetation: Uses on the Rocky Bayou tract are expected to continue to be sporadic, and largely limited to occasional hunting. Trespass logging has occurred in the past. Marking the tract boundaries may help to discourage non-intentional trespass harvesting in the future. As the trees on this tract continue to mature, habitat values are expected to increase. Assuming that the surrounding areas continue to be periodically logged, this tract would increasingly provide diversity and refuge for forest interior species. This is tempered by the small size of the tract and isolation from other conservation lands.

The Black Lake tract is expected to continue to be used primarily for hunting. No major changes in wildlife use or wildlife or vegetation species composition are expected. The surrounding areas are largely owned and managed by a hunting club, and for the foreseeable future, commercial logging in the area is unlikely.

On the Big Saline Bayou tract, few changes to wildlife composition are expected to occur over the foreseeable future. Opportunistic exotics, such as tallow tree, have become established along roadways and disturbed areas. Without control, tallow, Johnson grass, honeysuckle and other invasive plants could increasingly displace native vegetation, particularly in the disturbed areas of the tract.

No changes are expected to wildlife or vegetation resources on the Duck Lake tract.

Impacts of Implementing Alternative 2

Reasonably Foreseeable Actions

The BLM would dispose of the tracts. Disposal of individual tracts would occur on a tract-by-tract basis. Future use of the tracts is assumed to be similar to that of surrounding lands. These uses include limited dispersed recreation, production of forest products, and construction of hunting camps or cabins.

Impacts to Resources

Air Quality and Climate: Use of the tracts after disposal would include various construction activities that would entail use of mechanized equipment and cause ground disturbance. The use of motorized equipment would release hydrocarbon emissions. In addition, fugitive dust would be generated from areas of ground disturbance. Impacts would be localized and would not be much of an impact to regional air quality.

Cultural Resources: Impacts to historic properties or significant cultural sites are not expected. Before any transfer of management responsibilities or ownership, full consideration of the effect of that action on historic properties or significant cultural sites would take place at that time. A cultural resource survey, if needed, would occur at that time.

Minerals: Should disposal actions be proposed, a mineral report would be prepared that would identify the valuable mineral resources. The valuable mineral rights, such as oil and gas, would be reserved to the U.S. and would remain open to development. Existing lease rights would not be affected.

__Recreation and Visual Resources:__ If the tracts in Louisiana are transferred from federal to private ownership, it is assumed there would be no change to the recreation resources and recreational use of the tracts.

There could be direct impacts to the visual resource on the Rocky Bayou, Big Saline Bayou and Black Lake tracts, if forest products are removed from these tracts by the new owner. This impact would consist of the removal of vegetation from the tracts, changing the visual resource from a forested landscape to a more open landscape. The degree to which the visual resource would be altered cannot be estimated since the harvest method to be used, such as selective cut verses clear cutting, is not known. The removal of forest products from the Duck Lake tract is not anticipated, since it is a wetland/marsh, and the stocking level of trees on the tract is low (average less than 20 trees per acre) and would not be economically feasible. Because the tracts in Louisiana are located in sparsely populated rural areas, it is assumed that any change in the visual resource associated with the tracts would only be visible to adjacent land owners and not the general public. Therefore, no indirect or cumulative impacts would be expected to occur.

__Soils:__ If ownership is transferred, no direct, indirect or cumulative impacts are anticipated on the Duck Lake tract, since it is a wetland and construction of structures or roads would not be physically or economically feasible. Forest products could be removed from the Duck Lake tract, but the chance of this occurring is considered to be low, because of accessaibility and low stocking of trees (average 20 trees per acre or less) suitable for the production of forest products.

Direct impact to soils on the Big Saline Bayou, Black Lake, and Rocky Bayou tracts could occur by the construction of roads to access the tracts and the removal of forest products. Construction of structures on the Black Lake and Big Saline Bayou tracts is not anticipated because of wetness. The construction of structures on the Rocky Bayou tract is not anticipated, because of slope and isolated nature of the tract. If forest products are harvested from these tracts, impacts would consist of soil compaction, mixing of the soil horizons and erosion where the vegetative cover is removed. These impacts would cause both short term (five years or less) and long term (more than five years) loss of soil productivity. It is assumed if logging occurs on the tracts and the soil surface is exposed, wind and water erosion could occur unless preventive measures are applied. However, this impact would be short term because of the level terrain and wetness of the Black Lake and Big Saline tracts. If forest products are removed from the Rocky Bayou tract, exposed soil could be susceptible to wind and water erosion. However, it is assumed the area would revegetate naturally at the completion of the removal of forest products. If roads are constructed on the tracts, this impact would be long term and would cause a permanent loss of soil productivity. However, this loss of soil productivity would be localized to areas where road construction occurred.

No indirect or cumulative impacts to soils are anticipated to occur under this alternative.

__Water Quality, Surface and Ground:__ No substantial direct, indirect or cumulative impacts are foreseen to occur to ground water quality on the tracts in Louisiana.

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Direct impacts could occur to surface water quality, if the tracts are transferred from federal to private ownership. This impact would result in increased sedimentation, from the clearing of vegetation or forest products, into wetland areas/streams adjacent to or on the tracts. At this time, there is no way of knowing if this action would occur, or to what extent. These impacts would be short term and localized to areas where vegetation is removed. The degree to which this impact may occur could be minimized by reseeding disturbed areas at the completion of vegetative removal. However, since the tracts would be in private ownership when, and if, this action occurs, the BLM would not have authority to say how vegetative removal operations should be conducted.

Wetland/Riparian Zones: See discussion under Water Quality, Surface/Ground for this alternative. No other impacts to wetland or riparian areas are foreseen under this alternative.

Federally and State Listed Species: If transferred to private ownership, there is potential for logging portions of the Big Saline Bayou tract. While this would reduce the potential suitability of the tract for black bear, it is not expected to adversely affect the species.

Wildlife and Vegetation: The Rocky Bayou tract is likely to be used for timber production, causing a decline in habitat values for forest interior species and the loss of a mature and diverse mesic slope vegetation community, which are becoming increasingly rare in Louisiana.

The Black Lake tract is expected to continue to be used primarily for hunting. No major changes in wildlife use or wildlife or vegetation species composition are expected. The surrounding areas are largely owned and managed by a hunting club, and for the foreseeable future, commercial logging in the area is unlikely.

On the Big Saline Bayou tract, few changes to wildlife composition are expected to occur over the foreseeable future. The primary uses of the tract, other than for oil and gas production, is hunting and fishing. These uses are expected to continue. Control of the spread of invasive plants may not be a priority with a private landowner. Control of these plants is best accomplished when the populations are small. Once a species is well established, control often requires a substantial commitment of time and money for eradication.

No changes are expected to wildlife or vegetation resources on the Duck Lake tract.

Impacts of Implementing Alternative 3

This is the Preferred Alternative for the Rocky Bayou, Black Lake, Big Saline Bayou, and Duck Lake tracts in Louisiana.

Reasonably Foreseeable Actions

The tracts would be managed in partnership with other agencies and/or organizations. Anticipated uses include limited dispersed recreation and enhancement of existing habitat. Recreational facilities, such as parking, boat launch improvement, shelter (pavilion), and a trail, would be provided on the Big Saline Bayou tract, consistent with Recreational Opportunity Spectrum Class - Rural (Appendix C).

Impacts to Resources

Air Quality and Climate: Use of the tracts under this alternative would include recreation and habitat management activities. These uses would involve motorized equipment that would release hydrocarbon emissions. In addition, fugitive dust would be generated from areas of ground disturbance that might be caused by habitat management activities. Impacts would be localized and would not be much of an impact to regional air quality.

Prescribed burning might be used as a habitat management tool. Smoke from prescribed fires can release several "criteria air pollutants" identified by the Environmental Protection Agency. The need for prescribed fires would be evaluated during preparation of an activity plan, and site-specific actions would require a detailed burn plan. Any impacts from prescribed burning would be localized and temporary.

Cultural Resources: Impacts to historic properties or other cultural sites are not expected. Additional evaluation of possible impacts to historic properties or cultural sites would occur. Full legal compliance would occur before approval of proposed uses and/or actions by a partner.

Minerals: Should partnerships be proposed, during activity planning, a mineral report would identify the valuable mineral resources. The valuable mineral rights, such as oil and gas, would remain open to development. A partnership to consider recreational or educational opportunities would need to address existing or anticipated mineral development.

Recreation and Visual Resources: There would be no substantial direct, indirect or cumulative impacts to the recreation resource and visual resource on the Duck Lake tract. Recreation use would continue at current levels.

On the Big Saline Bayou tract, there could be direct impacts to the recreational and visual resources. Development may include construction projects, such as a nature trail, improvement of the existing boat launch, and a pavilion. These facilities would be available for use by the general public and school groups. If development occurs, the number of Visitor Use Days would increase, although at this time, there is no estimate of that number. The nature trail would be elevated, for use during both the wet and dry seasons.

Direct impacts to the visual resource would occur by the construction of the pavilion and nature trail. Trail construction would require vegetation removal along the route, thus altering the visual resource. This impact to the visual resource would be localized along the trail, and individuals walking the trail would be affected. Construction of the pavilion in a previously disturbed area would have minimal impacts on the existing visual resource.

Soils: No substantial new direct, indirect, or cumulative impact to soils on the Duck Lake tract is anticipated.

Direct impacts to the soil on the Big Saline Bayou tract could occur through the construction of a boat ramp, a pavilion, and elevated walkway/nature trail. If a boat ramp is improved or constructed, it would be in an area that is currently being used for that purpose. If a pavilion is constructed, it would be in an area where the soil has been previously disturbed. Construction of the elevated walkway/nature trail would impact the soil in a currently undisturbed area. Direct impacts would be the post holes for the walkway and pavilion supports, and grading and stabilizing the existing boat launch. Less than one tenth acre would be disturbed.

Currently no plans have been developed for the walkway, boat ramp or pavilion. A Coordinated Resource Management Plan and Environmental Assessment would be prepared and made available for public review prior to the construction of any facilities. Site-specific environmental impacts would be addressed at that time.

Water Quality, Surface and Ground: No substantial direct, indirect or cumulative impacts would occur to water quality on the Duck Lake tract.

A direct impact could occur to surface water quality on the Big Saline Bayou tract if the boat ramp, pavilion, and nature trail are constructed. Facilities construction would disturb the soil, and the vegetation removal could increase sedimentation into the surface water on the tract. This increase would be short term and localized to the construction area. Improvement and surfacing of the boat launch would decrease sedimentation into the Bayou by stabilizing the area. Degradation of water quality, either surface or ground, is not anticipated from construction of the nature trail and pavilion.

Wetland/Riparian Areas: No substantial direct, indirect or cumulative impacts would occur to wetland areas on the Duck Lake tract.

Approximately one tenth acre or less of wetland could be directly impacted by construction of the nature trail on the Big Saline Bayou tract. This impact would be the placement of supports for an elevated walkway. Cut, fill or dredging of a wetland would not occur. Construction of the nature trail would be done when the area is not inundated.

Federally and State Listed Species: Retention in federal ownerships and cooperative management is expected to improve overall habitat values on the Big Saline Bayou tract by removing exotic species, reducing impacts from off-road vehicles and increasing public

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awareness of the resource values on the tract. Although small, the tract would contribute toward maintaining a block of potentially suitable habitat for black bear in Rapides Parish.

Wildlife and Vegetation: The Rocky Bayou tract would be retained in its present state. The perimeter would be signed to discourage timber future trespass, but habitat values are expected to remain relatively static.

On the Big Saline Bayou tract, wildlife and vegetation could benefit from management, including the installation of nest boxes and removal of exotic vegetation. Species diversity is not expected to be altered substantially by management. Monitoring of oil and gas facilities, enforcement of no dumping and discouraging trail proliferation would assist in stabilizing this tract and avoiding further degradation of existing habitats.

Management actions at Black Lake are not expected to alter the existing vegetation communities or wildlife species composition.

On the Duck Lake tract, no changes are expected to wildlife or vegetation resources under this alternative.

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Table 4-1. Impacts to Arkansas Resources under each alternative

Resources	Alternative 1	Alternative 2	Alternative 3
Air Quality and Climate:	Use of the tracts under custodial management is expected to be very limited. Any use of motorized equipment would release hydrocarbon emissions. Impacts to air quality could also include generation of fugitive dust from ground disturbance. From the low levels of anticipated use, these impacts would be expected to be minimal.	Use of the tracts after disposal would include various construction activities that would entail use of mechanized equipment and cause ground disturbance. The use of motorized equipment would release hydrocarbon emissions. In addition, fugitive dust would be generated from areas of ground disturbance. Impacts would be localized and would not be much of an impact to regional air quality.	Use of the tracts under this alternative would include recreation and habitat management activities. These uses would involve motorized equipment that would release hydrocarbon emissions. In addition, fugitive dust would be generated from areas of ground disturbance that might be caused by habitat management activities. Impacts would be localized and would not be much of an impact to regional air quality. Prescribed burning might be used as a habitat management tool. Smoke from prescribed fires can release several "criteria air pollutants" identified by the Environmental Protection Agency. The need for prescribed fires would be evaluated during preparation of an activity plan, and site-specific actions would require a detailed burn plan. Any impacts from prescribed burning would be localized and temporary.
Cultural Resources:	Impacts to historic properties or other cultural sites are not expected with only occasional use of the tracts for hiking and seasonal hunting. For any development or use proposals, additional consideration of possible impacts to historic properties or cultural sites would occur before approval of any proposal.	Impacts to historic properties or significant cultural sites are not expected. Before any transfer of management responsibilities or ownership, full consideration of the effect of that action on historic properties or significant cultural sites would take place at that time. A cultural resource survey, if needed, would occur at that time.	Impacts to historic properties or other cultural sites are not expected. Additional evaluation of possible impacts to historic properties or cultural sites would occur. Full compliance with applicable laws and regulations would occur before approval of any proposed use and/or action by BLM or a partner.
Minerals:	The mineral estate of all tracts has been open to oil and gas leasing or mineral material sales. To date, industry has not shown interest in oil and gas development. Additionally, interest has not been shown in development of surface deposits of rock and other materials. Under this alternative, the mineral estate would remain open and industry could express interest in development of the mineral estate. However, actual development is not expected.	Should disposal actions be proposed, a mineral report would be prepared that would identify mineral resources. All tracts have low probability for development of oil and gas. Sale of mineral materials has not occurred, in part, due to the remote location of the tracts and the occurrence of the same material over a broad area. If the mineral report verifies the lack of valuable mineral resources, the mineral estate could be disposed without impacting the public's interest for mineral development.	Should partnerships be proposed, during activity planning a mineral report would identify the valuable mineral resources. The valuable mineral rights, such as oil and gas, would remain open to development. A partnership to consider habitat management or recreational opportunities would need to address existing or anticipated mineral development.

Resources	Alternative 1	Alternative 2	Alternative 3
Recreation and Visual Resources:	It is expected that there would be no new impacts to the recreational use. Current uses of the tracts for dispersed recreation, such as hunting and hiking, would continue at the current level. An estimate of the Visitor Use Days currently occurring on the tracts was not made because it would have been purely speculative since monitoring of recreational use of the tracts has not been done. However, as previously noted, recreational use of the tracts in Arkansas is limited since the tracts can only be accessed by crossing private property. Therefore, it is assumed recreational use is limited to friends and/or relatives of the adjacent land owners. No direct, indirect or cumulative impacts to the visual resource associated with the tracts in Arkansas are anticipated under Alternative 1.	If the tracts are transferred from federal to private ownership there would be no substantial direct, indirect or cumulative impacts to the recreational resources and use of the tracts in Arkansas. There could be direct impacts to the visual resource if forest products are removed from the tracts by the new owner. This impact would consist of the removal of vegetation from the tracts changing the visual resource from a forested landscape to a more open landscape. The degree to which the visual resource would be altered cannot be estimated since the harvest method to be used, such as selective cut verses clear cutting is not known. Similar impacts could occur from pasture conversion and construction activity. Because the tracts are located in sparsely populated rural areas, it is assumed that any change in the visual resource associated with the tracts would only be visible to adjacent land owners and not the general public. Therefore, no indirect or cumulative impacts would be expected to occur.	There would be no substantial direct, indirect or cumulative impacts occur to the recreation resource and visual resources. Recreation use would be expected to continue at current levels.
Soils:	No substantial direct, indirect or cumulative impacts are expected to occur to the soils on the Arkansas tracts. All the tracts are forested and no erosion from either wind or water was observed during the on-site inspection. A Temporary Use Permit (TUP) was issued for use of an existing road on the **Calf Creek** tract in 1997. A condition of approval required the permittee to construct water dips to minimize erosion of the road surface. When last inspected the water dips were functioning and no riling or erosion of the road surface was observed. The TUP is no longer in effect and natural revegetation of the road bed is occurring. BLM plans additional rehabilitation work on the road. This will include seeding portions of the road to augment the natural revegetation.	If the tracts in Arkansas are transferred from federal to private ownership soils could be directly impacted by the construction of roads to access the tract and the removal of forest products. These impacts would consist of soil compaction, mixing of the soil horizons and erosion where the vegetative cover is removed. These impacts could cause both short term (five years or less) and long term (more than five years) loss of soil productivity. It is assumed if logging occurs on the tracts and the soils surface is exposed wind and water erosion could occur unless preventive measures are applied. However, this impact would be short term because the area would revegetate naturally at the completion of the removal of forest products. If roads and/or structures are constructed on the tracts, this impact would be long term and would cause a permanent loss of soil productivity. However, this loss of soil productivity would be localized to the affected areas. No indirect or cumulative impacts to soils are anticipated to occur under this alternative.	No substantial new direct, indirect, or cumulative impacts to soils would be expected. Impacts from habitat management actions would be minor, localized and of short duration.

Resources	Alternative 1	Alternative 2	Alternative 3
Water Quality, Surface and Ground:	No substantial direct, indirect or cumulative impacts to water quality, surface or ground, would occur, if this alternative were selected. No water sampling was conducted on the tracts in Arkansas, however, there are currently no known impacts occurring to water quality, surface or ground on any of the tracts.	No substantial direct, indirect or cumulative impacts are foreseen to occur to ground water quality on the tracts in Arkansas if this alternative is selected. Direct impacts could occur to surface water quality, if the tracts are transferred from federal to private ownership. This impact would result in increased sedimentation, from the clearing of vegetation or forest products, into the intermittent streams adjacent to or on the tracts. At this time, there is no way of knowing if this action would occur or to what extent. These impacts would be short term and localized to areas where vegetation is removed. The degree to which this impact may occur is not known. Direct impacts could be minimized by reseeding disturbed areas at the completion of vegetative removal and leaving vegetative buffers along the intermittent stream channels that occur on the tracts. However, since the tracts would be in private ownership and should this action occur, the BLM would not have authority to say how, when and what measures should be implemented to prevent or lessen sedimentation.	No substantial direct, indirect or cumulative impacts to water quality would occur
Federally and State Listed Species	No impacts to Indiana bat or gray bat are expected under this alternative. Extensive logging, which could disrupt potential foraging habitat or Indiana bat roosting habitat, is not expected to occur on the tracts.	Under this alternative, there is the possibility of logging/or development on most of the tracts transferred to private ownership. However, difficulties due to terrain would likely preclude logging on much of the **Bear Creek** and **Campbell Hollow** tracts. While this has the potential to disrupt foraging habitat, the small size of the tracts and marginal quality of the habitat for Indiana bat and gray bat, reduces the potential for adversely impacting these species.	No impacts to Indiana bat or gray bat are expected under this alternative. Retaining these tracts in public ownership would benefit regional conservation efforts, but are unlikely to substantially affect either bat species.

Resources	Alternative 1	Alternative 2	Alternative 3
Wildlife and Vegetation:	No major changes to the wildlife or vegetation composition are anticipated in the foreseeable future under this alternative on the **Long Mountain Creek North and South, Foster Branch, Point Peter Mountain, Calf Creek, Campbell Hollow, Bear Creek, Middle Fork, Locust Mountain, West Fork,** and **Redland Mountain** tracts. In the absence of active habitat management, glade communities in particular would continue to degrade due to continuing intrusion by eastern red cedar and the exclusion of fire. On the **Drasco** tract, eliminating unauthorized use would permit the reestablishment of an understory on this tract, ultimately improving habitat for wildlife, such as deer and turkey.	Under this alternative, there is potential to alter the overall species composition in the areas of these tracts. The scope of the impact would depend on the activities taken once the tract left federal ownership. On the **Long Mountain Creek North and South,** and **Foster Branch** tracts, the surrounding use is predominately pasture and wood lot. Given the topography of the tracts, portions of the tract could be selectively logged, and the ridge tops cleared for additional pasture. It is likely that glade communities on these tracts would continue to degrade as a result of red cedar intrusion and the exclusion of fire. The surrounding uses of the **Calf Creek** tract include timber production and scattered home sites. If transferred to private ownership, it is possible, given the proximity of State Highway 377, that the northern portion of the tract could be used as a home site. If that occurred, it could affect the existing populations of Ozark chinquapin (*Castanea pumila var. ozarkensis*). It is assumed that in private ownership, use of the **Campbell Hollow** tract would be largely unchanged. Most of the tract is too steep to be successfully converted to pasture. The portion already in pasture could be used as a home site. Use of the lower terraces for trails, etc. could impact the large population of Moore's delphinium (*Delphinium newtonianum*). In private ownership, wildlife use of the **Bear Creek** tract is expected to remain unchanged. Most of the tract is too steep for use as a building site. Logging is unlikely because of the lack of access and the expense in this steep terrain. However, if logging were attempted, it would substantially reduce the value of the area for wildlife. Erosion would be very difficult to control and reestablishment of similar plant communities would require many decades. Wildlife use of the **Middle Fork**, Drasco, and **Locust Mountain** tracts in private ownership is expected to remain unchanged. On the **West Fork** Tract, in private ownership, there is potential for the construction of a camp or residence. Wildlife use in the area is not expected to be altered by this use. On the **Redland Mountain** tract, in private ownership, approximately ¼ of the tract could be expected to be at least selectively logged. Related disturbances, including road construction and staging areas would substantially alter the vegetation community on the lower slopes, reducing canopy cover and prompting release of understory and herbaceous growth. Given the steep slopes and stunted nature of overstory in the glade and ridgetop woodlands, it is unlikely these areas would be harvested.	Active habitat management activities on the tracts would likely include the control of invasive species, use of controlled burning to improve the quality of the fire dependent vegetation communities such as glades, soil stabilization where needed, and monitoring of special status species, particularly plants.

Table 4-2. Impacts to Louisiana Resources under each alternative

Resources	Alternative 1	Alternative 2	Alternative 3
Air Quality and Climate:	Use of the tracts under custodial management is expected to be very limited. Any use of motorized equipment would release hydrocarbon emissions. Impacts to air quality could also include generation of fugitive dust from ground disturbance. From the low levels of anticipated use, these impacts would be expected to be minimal.	Use of the tracts after disposal would include various construction activities that would entail use of mechanized equipment and cause ground disturbance. The use of motorized equipment would release hydrocarbon emissions. In addition, fugitive dust would be generated from areas of ground disturbance. Impacts would be localized and would not be much of an impact to regional air quality.	Use of the tracts under this alternative would include recreation and habitat management activities. These uses would involve motorized equipment that would release hydrocarbon emissions. In addition, fugitive dust would be generated from areas of ground disturbance that might be caused by habitat management activities. Impacts would be localized and would not be much of an impact to regional air quality. Prescribed burning might be used as a habitat management tool. Smoke from prescribed fires can release several "criteria air pollutants" identified by the Environmental Protection Agency. The need for prescribed fires would be evaluated during preparation of an activity plan, and site-specific actions would require a detailed burn plan. Any impacts from prescribed burning would be localized and temporary.
Cultural Resources:	Impacts to historic properties or other cultural sites are not expected. For any development or use proposals, additional consideration of its effect on historic properties or cultural sites would occur before approval of any proposal. Cultural resource surveys would be conducted, if needed.	Impacts to historic properties or significant cultural sites are not expected. Before any transfer of management responsibilities or ownership, full consideration of the effect of that action on historic properties or significant cultural sites would take place at that time. A cultural resource survey, if needed, would occur at that time.	Impacts to historic properties or other cultural sites are not expected. Additional evaluation of possible impacts to historic properties or cultural sites would occur. Full legal compliance would occur before approval of proposed uses and/or actions by a partner.
Minerals:	The mineral estate of all tracts has been open to oil and gas leasing and development. Currently, production is occurring on the Big Saline Bayou and Duck Lake tracts. Under this alternative leasing and development would continue.	Should disposal actions be proposed, a mineral report would be prepared that would identify the valuable mineral resources. The valuable mineral rights, such as oil and gas, would be reserved to the U.S. and would remain open to development. Existing lease rights would not be affected.	Should partnerships be proposed, during activity planning, a mineral report would identify the valuable mineral resources. The valuable mineral rights, such as oil and gas, would remain open to development. A partnership to consider recreational or educational opportunities would need to address existing or anticipated mineral development.

Resources	Alternative 1	Alternative 2	Alternative 3
Recreation and Visual Resources:	No substantial direct, indirect, or cumulative impacts to the recreational resources present and recreational use of the tracts are expected. Current uses of the tracts in Louisiana for dispersed recreation, such as hunting, hiking, or fishing, would continue at the current level. An estimate of the number of Visitor Use Days currently occurring on the tracts was not made since use of the tracts by recreationists has not been monitored and would be purely speculative. No substantial direct, indirect or cumulative impacts to the visual resource associated with the tracts in Louisiana are expected to occur.	If the tracts in Louisiana are transferred from federal to private ownership, it is assumed there would be no change to the recreation resources and recreational use of the tracts. There could be direct impacts to the visual resource on the **Rocky Bayou, Big Saline Bayou** and **Black Lake** tracts, if forest products are removed from these tracts by the new owner. This impact would consist of the removal of vegetation from the tracts, changing the visual resource from a forested landscape to a more open landscape. The degree to which the visual resource would be altered cannot be estimated since the harvest method to be used, such as selective cut verses clear cutting, is not known. The removal of forest products from the **Duck Lake** tract is not anticipated since it is a wetland/marsh, and the stocking level of trees on the tract is low (average less than 20 trees per acre) and would not be economically feasible. Because the tracts in Louisiana are located in sparsely populated rural areas, it is assumed that any change in the visual resource associated with the tracts would only be visible to adjacent land owners and not the general public. Therefore, no indirect or cumulative impacts would be expected to occur.	There would be no substantial direct, indirect or cumulative impacts to the recreation resource and visual resource on the **Duck Lake** tract. Recreation use would continue at current levels. On the **Big Saline Bayou** tract, there could be direct impacts to the recreational and visual resources. Development may include construction projects, such as a nature trail, improvement of the existing boat launch, and a pavilion. These facilities would be available for use by the general public and school groups. If development occurs, the number of Visitor Use Days would increase, although at this time, there is no estimate of that number. The nature trail would be elevated, for use during both the wet and dry seasons. Direct impacts to the visual resource would occur by the construction of the pavilion and nature trail. Trail construction would require vegetation removal along the route, thus altering the visual resource. This impact to the visual resource would be localized to along the trail, and individuals walking the trail would be affected. Construction of the pavilion in a previously disturbed area would have minimal impacts on the existing visual resource.

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Resources	Alternative 1	Alternative 2	Alternative 3
Soils:	No substantial new direct, indirect or cumulative impacts to soil productivity on the Louisiana tracts are anticipated.	If ownership is transferred, no direct, indirect or cumulative impacts are anticipated on the **Duck Lake** tract, since it is a wetland and construction of structures or roads would not be physically or economically feasible. Forest products could be removed from the Duck Lake tract, but the chance of this occurring is considered to be low, because of accessibility and low stocking of trees (average 20 trees per acre or less) suitable for the production of forest products. Direct impact to soils on the **Big Saline Bayou**, **Black Lake**, and **Rocky Bayou** tracts could occur by the construction of roads to access the tracts and the removal of forest products. Construction of structures on the **Black Lake** and **Big Saline Bayou** tracts is not anticipated because of wetness. The construction of structures on the **Rocky Bayou** tract is not anticipated because of slope and isolated nature of the tract. If forest products are harvested from these tracts, impacts would consist of soil compaction, mixing of the soil horizons and erosion where the vegetative cover is removed. These impacts would cause both short term (five years or less) and long term (more than five years) loss of soil productivity. It is assumed if logging occurs on the tracts and the soil surface is exposed, wind and water erosion could occur unless preventive measures are applied. However, this impact would be short term because of the level terrain and wetness of the **Black Lake** and **Big Saline** tracts. If forest products are removed from the **Rocky Bayou** tract, exposed soil could be susceptible to wind and water erosion. However, it is assumed the area would revegetate naturally at the completion of the removal of forest products. If roads are constructed on the tracts, this impact would be long term and would cause a permanent loss of soil productivity. However, this loss of soil productivity would be localized to areas where road construction occurred. No indirect or cumulative impacts to soils are anticipated to occur under this alternative.	No substantial new direct, indirect, or cumulative impact to soils on the **Duck Lake** tract is anticipated. Direct impacts to the soil on the **Big Saline Bayou** tract could occur through the construction of a boat ramp, a pavilion, and elevated walkway/nature trail. If a boat ramp is improved or constructed, it would be in an area that is currently being used for that purpose. If a pavilion is constructed, it would be in an area where the soil has been previously disturbed. Construction of the elevated walkway/nature trail would impact the soil in a currently undisturbed area. Direct impacts would be the post holes for the walkway and pavilion supports, and grading and stabilizing the existing boat launch. Less than one tenth acre would be disturbed. Currently no plans have been developed for the walkway, boat ramp or pavilion. A Coordinated Resource Management Plan and Environmental Assessment would be prepared, and made available for public review prior to the construction of any facilities. Site-specific environmental impacts would be addressed at that time.

Resources	Alternative 1	Alternative 2	Alternative 3
Water Quality, Surface and Ground:	No substantial direct, indirect or cumulative impacts would occur to water quality, surface or ground, if this alternative were selected. There are currently no known impacts occurring to water quality on the tracts in Louisiana.	No substantial direct, indirect or cumulative impacts are foreseen to occur to ground water quality on the tracts in Louisiana. Direct impacts could occur to surface water quality, if the tracts are transferred from federal to private ownership. This impact would result in increased sedimentation, from the clearing of vegetation or forest products, into wetland areas/streams adjacent to or on the tracts. At this time, there is no way of knowing if this action would occur or to what extent. These impacts would be short term and localized to areas where vegetation is removed. The degree to which this impact may occur could be minimized by reseeding disturbed areas at the completion of vegetative removal. However, since the tracts would be in private ownership when and if this action occurs, the BLM would not have authority to say how vegetative removal operations should be conducted.	No substantial direct, indirect or cumulative impacts would occur to water quality on the Duck Lake tract. A direct impact could occur to surface water quality on the **Big Saline Bayou** tract if the boat ramp, pavilion, and nature trail are constructed. Facilities construction would disturb the soil, and the vegetation removal could increase sedimentation into the surface water on the tract. This increase would be short term and localized to the construction area. Improvement and surfacing of the boat launch would decrease sedimentation into the Bayou by stabilizing the area. Degradation of water quality, either surface or ground, is not anticipated from construction of the nature trail and pavilion.
Wetland/ Riparian Areas:	No substantial direct, indirect or cumulative impacts would occur to the wetland areas found on the **Black Lake, Big Saline Bayou** or **Duck Lake** tracts. The mineral development on **Big Saline Bayou** occurred in the early 1960s. It is estimated that approximately three acres of the wetland area found on the tract were disturbed at that time. Mounds were constructed on which to place the well heads to prevent them from being inundated during the fall and winter months. No plans were developed in the 1960s which would require the leveling of these mounds at the completion of the production phase of mineral development. However, the disturbed area has stabilized through natural revegetation and no new impacts are anticipated.	See discussion under Water Quality, Surface/Ground for this alternative. No other impacts to wetland or riparian areas are foreseen under this alternative.	No substantial direct, indirect or cumulative impacts would occur to wetland areas on the Duck Lake tract. Approximately one tenth acre or less of wetland could be directly impacted by construction of the nature trail on the **Big Saline Bayou** tract. This impact would be the placement of supports for an elevated walkway. Cut, fill or dredging of a wetland would not occur. Construction of the nature trail would be done when the area is not inundated.
Federally and State Listed Species:	Louisiana black bear is not expected to be impacted by the planned actions under this alternative.	If transferred to private ownership, there is potential for logging portions of the **Big Saline Bayou** tract. While this would reduce the potential suitability of the tract for black bear, it is not expected to adversely affect the species.	Retention in federal ownerships and cooperative management is expected to improve overall habitat values on the **Big Saline Bayou** tract by removing exotic species, reducing impacts from off-road vehicles and increasing public awareness of the resource values on the tract. Although small, the tract would contribute toward maintaining a block of potentially suitable habitat for black bear in Rapides Parish.

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Resources	Alternative 1	Alternative 2	Alternative 3
Wildlife and Vegetation:	Uses on the **Rocky Bayou** tract are expected to continue to be sporadic, and largely limited to occasional hunting. Trespass logging has occurred in the past. Marking the tract boundaries may help discourage non-intentional trespass harvesting in the future. As the trees on this tract continue to mature, habitat values are expected to increase. Assuming that the surrounding areas continue to be periodically logged, this tract would increasingly provide diversity and refuge for forest interior species. This is tempered by the small size of the tract and isolation from other conservation lands. The **Black Lake** tract is expected to continue to be used primarily for hunting. No major changes in wildlife use or wildlife or vegetation species composition are expected. The surrounding areas are largely owned and managed by a hunting club, and for the foreseeable future commercial logging, in the area is unlikely. On the **Big Saline Bayou** tract, few changes to wildlife composition are expected to occur over the foreseeable future. Opportunistic exotics, such as tallow tree, have become established along roadways and disturbed areas. Without control tallow, Johnson grass, honeysuckle and other invasive plants could increasingly displace native vegetation, particularly in the disturbed areas of the tract. No changes are expected to wildlife or vegetation resources on the **Duck Lake** tract.	The **Rocky Bayou** tract is likely to be used for timber production, causing a decline in habitat values for forest interior species and the loss of a mature and diverse mesic slope vegetation community, which are becoming increasingly rare in Louisiana. The **Black Lake** tract is expected to continue to be used primarily for hunting. No major changes in wildlife use or wildlife or vegetation species composition are expected. The surrounding areas are largely owned and managed by a hunting club, and for the foreseeable future, commercial logging in the area is unlikely. On the **Big Saline Bayou** tract, few changes to wildlife composition are expected to occur over the foreseeable future. The primary use of the tract, other than for oil and gas production, is hunting and fishing. These uses are expected to continue. Control of the spread of invasive plants may not be a priority with a private landowner. Control of these plants is best accomplished when the populations are small. Once a species is well established, control often requires a substantial commitment of time and money for eradication. No changes are expected to wildlife or vegetation resources on the **Duck Lake** tract.	The **Rocky Bayou** tract would be retained in its present state. The perimeter would be signed to discourage timber future trespass, but habitat values are expected to remain relatively static. On the **Big Saline Bayou** tract, wildlife and vegetation could benefit from management, including the installation of nest boxes and removal of exotic vegetation. Species diversity is not expected to be altered substantially by management. Monitoring of oil and gas facilities, enforcement of no dumping and discouraging trail proliferation would assist in stabilizing this tract and avoiding further degradation of existing habitats. Management actions at **Black Lake** are not expected to alter the existing vegetation communities or wildlife species composition. On the **Duck Lake** tract, no changes are expected to wildlife or vegetation resources under this alternative.

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Chapter 5
Consultation and Coordination

Public Participation

BLM's planning regulations require a process that is open to public involvement. Early in the planning process there is opportunity for public involvement for identification of issues and development of planning criteria. There are also opportunities for the public to review draft planning documents and/or file protests before planning decisions are approved. A PA/EA may be released as either a Proposed or a Draft PA/EA. A Proposed PA is subject to public 30-day protest period and 60-day Governor's consistency review. When a Draft PA/EA is released, the BLM seeks public comments before preparing a Proposed PA/EA. After considering the public comments, the draft may be modified before a Proposed PA/EA is released. After the consistency review and resolution of any protests, the PA may be approved.

A Notice of Intent to Prepare the Arkansas and Louisiana PA/EA was published in the Federal Register on September 19, 1997. The notice was also published in local newspapers in both states. The notices invited public participation in development of issues and planning criteria through November 1, 1997. A Proposed PA/EA was prepared and released in November of 1999. In response to public concerns, BLM withdrew the Proposed PA/EA to collect additional information before making a decision. Beginning December 28, 1999 the planning process was reopened to public comments. The comment period extended through February 29, 2000. A public meeting to receive comments was held in Marshall Arkansas on February 24, 2000. After reviewing the public comments, BLM decided to revise the document and release a Draft PA/EA for public review.

Upon distribution of this Draft PA/EA public comments will be accepted during a 30-day review period. Comments will be considered and a Proposed PA/EA will be prepared and released for a 30-day protest period, and sent to the Governors of of both states for a 60-day consistency review. The Approved PA and Decision Record will be prepared after any protests or inconsistencies have been resolved.

Copies of this Draft PA/EA will be furnished to public libraries in the counties and parishes, which contain the tracts that are the subject of this document. It will also be available on the internet at http://www.es.blm.gov/jfo. Copies will also be sent to all persons on the existing mailing list, and to anyone who requests a copy to review. In addition, the following agencies and organizations will be sent a copy of the Draft PA/EA, along with a request to review the document.

Federal Agencies

National Park Service
Buffalo National River

USA Corps of Engineers
Little Rock District

USDA Forest Service
Ozark-St. Francis National Forests

USDA Forest Service
Ouachita National Forest

USDA Natural Resource Conservation Service
Little Rock

U.S. Fish and Wildlife Service
Ecological Services Office
Conway

U.S. Geological Survey,
Water Resources Division
Little Rock

USA Corps of Engineers,
New Orleans District

National Park Service
Cane River Creole National Historical Park

U.S. Fish and Wildlife Service
Ecological Field Office
Lafayette

USDA Forest Service
Kisatchie National Forest

Federally Recognized Native American Tribes

Quapaw Tribe of Oklahoma

Caddo Indian Tribe

Osage Tribe of Indians

Wichita Tribe

Choctaw Nation of Oklahoma

Cherokee Nation of Oklahoma

United Keetoowah Band of Cherokee Indians

Chitimacha Tribe

Coushatta Tribe

Jena Band of Choctaw

Tunica-Biloxi Indians of Louisiana

State Recognized Tribes

Caddo Adai Indians of Louisiana

Choctaw Apache Tribe

Clifton Choctaw

United Houma Nation

Louisiana Band of Choctaws

Arkansas State Agencies

Arkansas State Clearinghouse

State Historic Preservation Officer

Arkansas Archaeological Survey,
State Archaeologist Office

Arkansas Natural Heritage Commission

Arkansas Highway and Transportation Dept.
Environmental Department

Arkansas Department of Environmental Quality offices in Russellville, Hope, Van Buren and Mountain Home

Arkansas Game and Fish Commission,
Construction, Engineering and Real Estate Section

Louisiana State Agencies

Governors Commission
on Indian Affairs

Louisiana Natural Heritage Program

State Historic Preservation Office,
Office of Cultural Development

Department of Wildlife and Fisheries,
Inland Fish Division.

Department of Agriculture and Forestry,
Office of Forestry

Louisiana Department of Natural Resources,
Coastal Management Division

Department of Environmental Quality,
Office of Water Resources

Department of Natural Resources,
Office of Conservation

Louisiana State Parks

Louisiana State Land Office

Offices of the Department of Environmental Quality in Shreveport and Lafayette

Arkansas Local Government Agencies

Baxter County Judge

Baxter County Health Inspector

Cleburne County Judge's Office

Crawford County Judge

Crawford County Health Inspector

Fulton County Judge

Pike County Judge

Pike County Sanitation Inspector

Searcy County Judge

Searcy County Health Inspector

Van Buren County Judge

Van Buren County Sanitation Inspector

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Louisiana Local Government Agencies

DeSoto Parish Police Jury

Health Inspector, DeSoto Parish

Supervisor, Munday Landfill, DeSoto Parish

Natchitoches Parish Police Jury,

Sanitarian, Natchitoches Parish

Sanitarian, Rapides Parish

Administrator, St. Martin Parish

Health Inspector, St. Martin Parish

Natchitoches Parish Administrator

List of Preparers

The Arkansas and Louisiana Planning Analysis/Environmental Assessment was prepared by a team of specialists from the Jackson Field Office. The members of this team are:

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GLOSSARY

(Including Acronyms and Abbreviations)

Activity Plan. A site-specific plan for the management of one or more resources, e.g. allotment management plan or habitat management plan. Activity plans provide the additional detail necessary to implement decisions made in the Resource Management Plan.

Acquired Land Leases. Federal mineral leases on lands where mineral ownership has been acquired by the federal government from non-federal sources.

Anticlinal Structures. Geologic deposits having a fold, generally convex upward, whose core contains the stratigraphically older rocks.

Aquifer. A geologic formation, group of formations, or part of a formation that contains sufficient saturated, permeable material to be able to yield significant quantities of water to wells and springs.

Area of Critical Environmental Concern (ACEC). An area within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety form natural hazards.

Calcareous. Outcrops of calcareous (calcium-rich) bedrock such as limestone, dolomite, and marble generally limited to relatively small areas.

Closed. Designated areas, routes, roads and trails where the use of OHV's is permanently or temporarily prohibited. Use by emergency vehicles and beach maintenance vehicles is allowed.

Confined Aquifer. An aquifer bounded above and below by impermeable beds, or by beds of distinctly lower permeability than that of the aquifer itself; and aquifer containing confined ground water.

Cultural Resource. The fragile and nonrenewable remains of human activity, occupation, or endeavor reflected in districts, sites, structure, buildings, objects, artifacts, ruins, works of art, architecture, and natural features that were of importance in human events. These resources consist of (1) physical remains, (2) areas where significant human events occurred even though evidence of the event no longer remains, and (3) the environment immediately surrounding the resource.

Cumulative Impact. The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Disposal. Transfer of ownership of a tract of public land from the United States to another party.

Dolomite glade. A forest opening or isolated prairie resulting from thin soils overlying magnesium rich limestone called dolomite.

Endangered Species. Any species formally recognized by the USFWS as in danger of extinction throughout all or a significant portion of its range.

Ephemeral Stream. A stream or part of a stream that flows only after precipitation, and whose channel is always above the water table.

Ephemeral Wetland. Wetlands that periodically do not hold any standing water.

Fault Traps. An oil or gas trap in which the closure results from the presence of one or more faults.

Flooding. The temporary covering of the soil surface by water from any source. Shallow water standing during or shortly following rain is excluded from the definition of flooding. Marshes and swamps are excluded from the definition of flooding because water is more than a temporary covering

Federal Land Policy and Management Act of 1976 (FLPMA). Public Law 94-579, which gives the BLM legal authority to establish public land

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policy, to establish guidelines for administering such policy, and to provide for the management, protection, development, and enhancement of public land.

Federal Mineral Ownership (FMO). Lands on which either the entire mineral estate or certain mineral rights are owned by the federal government.

Forest land. Land carrying forest growth, or if totally lacking, bearing evidence of former forest which contains 10 per cent of more crown cover.

Forest product. Forest products would include any forest land product, including but not limited to timber, plywood, chips, post poles, Christmas trees, greenery, nuts, chemicals, and resins.

Groundwater. Water within the earth that supplies wells and springs.

Habitat. A specific set of physical conditions that surround a single species, a group of species, or a large community. In wildlife management, the major components of habitat are considered to be food, water, cover, and living space.

Hazardous Wastes. Those materials defined in Section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 and listed in 40 CFR 261.

Herbaceous. A plant with little or no woody tissue that dies back at the end of the growing season.

High quality community. Plant communities that show little change from the historical species composition and community structure, or excellent recovery from historic alterations.

Historic Property. Sites of human activity, an object, a building, or a prehistoric or historic district included in, or eligible for inclusion on the National Register of Historic Places. A site that potentially meets the criteria for inclusion on the National Register of Historic Places is treated as elegible until further scientific investigations are completed.

Hydrocarbons. Organic chemical compounds of hydrogen and carbon atoms that form the basis of all petroleum products, including oil and gas.

Interdisciplinary. Characterized by interactive participation or cooperation of two or more disciplines or fields of study.

Intermittent Stream. A stream that does not flow year round but has some association with ground water for surface or subsurface flows.

Leasable Minerals. Those minerals or materials that can be leased from the federal government. Includes oil and gas, coal, phosphate, sodium, potash, and oil shale.

Lease (Mineral). A contract between an owner of mineral rights and another, granting the latter the right to search for and produce gas, hydrocarbons, or other mineral substances upon payment of an agreed-upon rental and royalties based on production.

Lease Notice. Provides more detailed information concerning limitations that already exist in law, lease terms, regulations, or operational orders. A lease notice also addresses special items the lessee would consider when planning operations, but does not impose new or additional restrictions.

Lease Stipulations. Additional specific terms and conditions that change the manner in which operation may be conducted on a lease, or modify the lease rights granted.

Limestone glade. A forest opening or isolated prairie resulting from thin soils overlying limestone substrate.

Locatable Minerals. Minerals or materials subject to disposal and development through the Mining Law of 1872, (as amended). Generally includes metallic minerals such as gold and silver and other materials not subject to lease or sale (such as some bentonites, limestone, talc, and some zeolites).

Low quality vegetation community. Plant communities that are lacking in expected plant species and show visible changes in community structure.

Medium quality plant community. Plant communities that show visible changes from the historical species composition and community structure, but which will improve with appropriate management and time.

Mesic. Related to conditions of moderate moisture or water supply. Used to describe organisms occupying moist habitats.

National Environmental Policy Act (NEPA) of 1969. Public Law 91-190, which established environmental policy for the nation. Among other items, NEPA requires federal agencies to consider environmental values in decision-making processes.

National Register of Historic Places (NRHP). A register of districts, sites, buildings, structures, and objects, significant in American history, architecture, archaeology, and culture, established by the National Historic Preservation Act of 1966 and maintained by the Secretary of the Interior.

Neotropical migratory bird. Birds that breed in temperate areas of the U.S. and Canada and migrate south to winter in the Carribean, Mexico, Central or South America, includes many of the songbirds.

No Surface Occupancy (NSO). Use or occupancy of the land surface for fluid mineral exploration or development is prohibited to protect identified resource values. The NSO stipulation includes stipulations which may have been worded as "No Surface Use/Occupancy," "No Surface Disturbance," "Conditional NSO," and "Surface Disturbance or Surface Occupancy Restriction (by location)."

Occurrence. A specific record of a single or group of plant or animal species.

Off-Highway Vehicle (OHV). This term replaces "off-road vehicle (ORV)", and means any motorized vehicle capable of or designed for travel on or immediately over land, water, or other natural terrain.

Open. Designated areas, routes, roads, and trails where unrestricted OHV use may occur (subject to operating regulations and vehicle standards set forth in BLM Manuals 8341 and 8343).

Prime Farmland. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land, but not urban built-up land or water).

Public Domain. Public lands which were originally (that is upon the admittance of a state to the United States) owned the federal government and have since that time remained in continuous federal ownership.

Public Domain Leases. Federal mineral leases of mineral interests which were originally (that is upon the admittance of a state to the United States) owned the federal government and have since that time remained in continuous federal ownership.

Reasonably Foreseeable Development (RFD). A description of anticipated future development of minerals or other resources, used as a basis for assessing the environmental impacts of RMP decisions.

Recreation Opportunity Spectrum (ROS). A continuum used to characterize recreation opportunities in terms of setting, activity, and experience opportunities. The spectrum contains six classes: Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized, Rural, Urban, Residential Beach.

Recreation and Public Purposes (R&PP). Refers to both the Recreation and Public Purposes Act (43 USC 869 (a)) and the uses to be made of public land transferred under the act. The objective of the R&PP Act is to meet the needs of state and local government agencies and nonprofit organizations by leasing or conveying public land required for recreation and public purposes uses. Examples of uses made of R&PP lands are parks, schools, religious facilities, and camps for youth groups. Transfer of land ownership under the provisions of the R&PP Act is referred to as R&PP conveyance.

Resource-Based Outdoor Recreation. Resource-based outdoor recreation is dependent on some particular element or combination of elements in the natural or cultural environments. Examples would be hunting, fishing camping, boating, and studying nature.

Right-of-Way. The public or federal land authorized to be used or occupied pursuant to a right-of-way grant.

Right-of-Way Grant. A document authorizing the use of public or federal lands for the construction, operation, maintenance, and termination of a project (e.g., utility line, road).

Riparian. Situated on or pertaining to the bank of a river, stream, or other body of water. Normally used to refer to the plants of all types that grow rooted in the water table of streams, ponds, and springs.

Riparian Area. Riparian areas are a form of wetland transition between permanently saturated wetlands and upland areas. These areas exhibit vegetation or physical characteristics reflective of permanent surface or subsurface water influence. Excluded are such sites as ephemeral streams or washes that do not exhibit the presence of vegetation dependent upon free water in the soil.

Salable Minerals. Minerals that may be sold under the Material Sale Act of 1947, as amended. Included are common varieties of sand, stone, gravel, and clay.

Scoping Process. An early and public process for determining the nature, significance, and range of issues to be addressed related to a proposed action.

Segregation. The removal for a limited period, subject to valid existing rights, of a specified area of the public lands from the operation of the public land laws, pursuant to the exercise by the Secretary of the Interior of regulatory authority as conferred by law to allow for the orderly administration of the public lands.

Significance. A high degree of importance as indicated by either quantitative measurements or qualitative judgments. Significance may be determined by evaluating characteristics pertaining to location extent, consequences,and duration.

Soil Association. A mapping unit used on general soil maps in which two or more defined taxonomic units occurring together in a characteristic pattern are combined because the scale of the map or the purpose for which it is being made does not require delineation of the individual soils.

Special Recreation Management Area (SRMA). An area where special management or intensive recreation management is needed. Recreation activity plans are required, and greater managerial investment in facilities or supervision can be anticipated.

Special Status Species. Wildlife and plant species either federally listed or proposed for listing as endangered or threatened, state-listed, BLM-determined priority species, or listed by the State Heritage organization..

Species of Concern. Species that are not yet listed as endangered or threatened, but that are undergoing a status review. This may include species whose populations are consistently and widely dispersed or whose ranges are restricted to a few localities, so that any major habitat change could lead to extinction. A species that is particularly sensitive to some external disturbance factors.

Split-Estate Lands. A given land area where the surface and mineral estates are in different ownerships. Most often split-estate areas occur where the surface is owned by private individuals, corporations, or groups or by state or local government, and the minerals are federally owned.

Structural Anomalies. Dome-shaped features in the (reservoir) rocks of the earth's subsurface that are prone to accumulated oil and gas deposits.

Surface Managing Agency (SMA). An agency of the federal government which has the primary responsibility for management of a particular area of land, such as the Forest Service, National Park Service, the Navy, Air Force, or the BLM.

Surficial. Pertaining to or lying in or on a surface the surface of the earth; e.g. "surficial weathering" of a rock, or a "surficial structure" formed by creep.

Thermal Maturation. Process of temperature increase in the earth's subsurface necessary for the generation of oil and gas from source rocks.

Threatened Species. Any species formally recognized by the USFWS as likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Undifferentiated Aquifers. Un-named surficial and intermediate water bearing units that are important sources of water locally where other aquifers do not contain potable waters.

Unique Farmland. Unique farmland is land other than prime farm land that is used for the production of specific high value food and other fiber crops. It has the special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality and/or high yields of a specific crop when treated and managed according to acceptable farming methods. Examples of such crops are citrus, tree nuts, olives, cranberries, fruit, and vegetables.

User-Oriented Outdoor Recreation. User-oriented outdoor recreation can be provided almost anywhere for the convenience of the user. Examples of user-oriented outdoor recreation would be golf, tennis, baseball, archery, skeet, and playground activities.

Visual Resource Management (VRM). The planning, designing, and implementation of management objectives for maintaining scenic value and visual quality on public lands.

Visitor Use Days (VUDs). A measure of the amount of recreational use. In this document, a VUD is calculated by estimating the amount of time one person participated in a recration activity, multiplied by the estimated number of visitors to a specific tract, and divided by the number of hours in a day that individuals would be expected to go to the tract.

Wetlands. Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Withdrawal. A formalized action restricting specified land from operation or disposal under specified laws, either mineral laws or land disposal laws, or both. Can also be used to transfer jurisdiction of land to another federal agency.

Woodland. Forest land on which trees are present but form only an open canopy, the intervening areas being occupied by lower vegetation. Forest lands which produce or are capable of producing no more than 20 cubic feet per acre per year of commercially important tree species.

Acronyms and Abbreviations

ATV - All Terrain Vehicle
CFR - Code of Federal Regulations
EA - Environmental Analysis
NOA - Notice of Availability
NOI - Notice of Intent
NSO - No Surface Occupancy
PA - Planning Analysis
TUP - Temporary Use Permit

U.S. Government Agencies

BLM - Bureau of Land Management
COE - Army Corps of Engineers

Laws

FLPMA- Federal Land Policy and Management Act of 1976
LWCF - Land and Water Conservation Fund
NEPA- National Environmental Policy Act of 1969
R&PP- Recreation and Public Purposes Act

Appendix A - Lands

This appendix is a compilation of the legal locations of Public Domain lands, lands which have been patented under the Recreation and Public Purposes Act, Lands Withdrawn to other Federal Agencies, and Lands of Uncertain Title for both Arkansas and Louisiana. The lists are separated by state and category. In addition to these lists, the criteria for acquisition of lands is included.

Land Acquisition Criteria

This section lays out the criteria and process for evaluating proposals for acquisition. For example, it states what types of lands are appropriate for BLM acquisition by keeping in mind the Bureau's special expertise, mandate, and talents.

Federal Land Policy and Management Act

The beginning point for any list of criteria is the Federal Land Policy and Management Act (FLPMA), Sec. 205(b) which states:

> Acquisitions pursuant to this section shall be consistent with the mission of the department involved and with applicable departmental land-use plans.

Sec. 205(c) further states:

> Lands and interests in lands acquired by the Secretary pursuant to this section or Section 206 shall, upon acceptance of title, become public lands, and, for the administration of public land laws not repealed by this Act, shall remain public lands.

It is imperative that prior to initiating a full scale program that a thorough review of pertinent laws, executive orders and Departmental initiatives to succinctly outline the rationale for this effort.

Resource and Management Criteria

Presence of valuable resources on lands, and suitability for management of land by BLM, would be important criteria. As a starting point, the following criteria should be applied when evaluating potential land acquisitions:

- Critical habitats adjacent to existing (or proposed) conservation system units (CSUs), state or local parks, etc.
- Lands that could serve to further the purposes of regional conservation and

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restoration.

- Greenways and trails. Corridors that fill-out regional trail systems or provide linkages between two or more existing trail systems.
- Habitat corridors. Habitat fragmentation is a critical ecological problem. Acquisition and preservation of corridors and other tracts (e.g., abandoned fields) improve the chances for species viability. BLM may be suited to this type of work, perhaps in partnership with private organizations, local governments, or state or federal agencies.
- Lands threatened by urban sprawl.
- Lands that could improve Americans lives by protecting open space and providing recreational opportunities.
- Lands that fit into a unique role/skill that BLM possesses.
- Lands under immediate threat from development and BLM is the only agency in a position to acquire it.
- Lands that fit a niche that BLM, as an agency, is best suited to manage (e.g., prairie/grassland, open space/green space preservation, islands, unique geologic or topographical feature, etc.).
- Lands under threat and which other agencies are not in a position to acquire and will meet a National need.
- Lands that will meet an existing program need.

Land and Water Conservation Fund Criteria

There are established ranking criteria for land acquisitions under the Land and Water Conservation Fund (LWCF). These criteria include the relative threat if the property is not acquired, proximity to a major population center, a subjective evaluation of critical environmental factors which demand protection by U.S. Department of the Interior (DOI) bureaus, possibilities for recreation, the availability of partners, and access to the property (and whether access is dependant on condemnation). Also important to this ranking is a description of the tract's relationship to other DOI lands or other Federal conservation system units, and whether there are willing sellers. All other LWCF proposals submitted by the BLM (and other DOI Bureaus) are required to meet these ranking criteria. Only the highest priorities are forwarded to Congress as part of the president's budget. Previous BLM submissions for LWCF acquisition in Arkansas did not rank high enough to obtain funding.

TABLE A-1. ARKANSAS - PUDLIC DOMAIN TRACTS

Name of Tract	Acres	County/ Parish	Legal Description
Arkansas			**5th Principal Meridian**
Long Mountain Creek Tracts	80	Baxter	T. 21 N., R. 14 W., Sec. 19, SE¼NW¼, SW¼SW¼
Foster Branch Tract	40	Fulton	T. 21 N., R. 14 W., Sec. 31, SE¼NW¼
Buffalo River Tract	40	Searcy	T. 15 N., R. 18 W., Sec. 3, SW¼NE¼
Point Peter Mountain Tract	40	Searcy	T. 14 N., R. 18 W., Sec 11, SW¼NW¼
Calf Creek Tract	40	Searcy	T. 14 N., R. 18 W., Sec. 14, NE¼NE¼
Campbell Hollow Tract	40	Searcy	T. 14 N., R. 17 W., Sec 31, NW¼NE¼
Bear Creek Tract	160	Searcy	T. 13 N., R. 17 W., Sec. 20, W½NE¼, SE¼NW¼, NW¼SE¼, NW¼SE¼
Middle Fork Tract	40	Searcy	T. 13 N., R. 17 W., Sec 27, NW¼SE¼
Drasco Tract	5	Cleburne	T. 12 N., R. 9 W., Sec. 33, N½NW¼SW¼SW¼
Locust Mountain Tract	40	Crawford	T. 11 N., R. 31 W., Sec. 24, NE¼NE¼
West Fork Tract	10	Van Buren	T. 10 N., R. 16 W., Sec. 9, N½S½NE¼SE¼
Radiand Mountain	40	Pike	T. 5 S., R. 26 W, Sec. 11, NW¼SW¼

TABLE A-2. ARKANSAS - RECREATION AND PUBLIC PURPOSE PATENTED LANDS

LEGAL DESCRIPTION	COUNTY	ACRES	HOLDING AGENCY
T. 14 N., R. 17 W., Sec 35, SESW	Madison	40	Ar. Game & Fish
T. 11 N., R. 6 E., Sec. 3, SWNW; Sec. 4, SENE, Lots 8, 11, 12, 13, 14; Sec. 9, SWNE, Lot 2; Sec. 10, Lot 3; Sec. 22, Lot 2; T. 12 N., R. 6 E., Sec. 8, Lot 4; T. 17 N., R. 7 E., Sec. 33, Lots 4, 5, 6, 7, 8.	Poinsett & Greene		Ar. Game & Fish
T. 18 S., R. 27 W., Sec. 7, W2NE, NWSE, E2W2NE, SWSE, All (Frac. NE of River); Sec. 21, SWNE (W. of river), N2SE (E. of river)	Miller	90	Ar. Game & Fish
T. 11 N., R. 6 E., Sec. 2, Lot 3; Sec. 10, lots 4 & 11; Sec. Lot 1; T. 12 N., R. 6 E., Sec. 4, SENW, E2SW, Lots 5, 6, 10, 11, 14 & 15, Sec. 5, Lots 6 & 7, Sec. 8, Lot 1, Sec. 9, SENW , NESW, lots 1 & 4; Sec. 22, S2SE; Sec. 27, W2SW, Sec. 33, Lot 7; T. 12 N., R 7 E., Sec. 2, Lots 5, 6, 7; T. 13 N., R. 6 E., Sec. 1, Lots 1, 8, 9, 10, 19; Sec 12 Lots, 1, 2, 3, 4, 9, 14, 19; Sec. 13, Lot 7; Sec. 14, Lot 5, 6, 7, 8, 9, 10, 11, 14, 15, 16; Sec. 24, Lot 3; Sec. 27, Lots 11, 16, Sec. 25, Lot 12; Sec. 28, Lot 12; Sec. 33, Lot 6, 7, 8, 9, 10, 11, 14; Sec. 34, Lot 1, 6, 14, Sec. 35, Lot 2; Sec. 36, Lot 4;	Craighead, Poinsett, AR & Dunklin, MO.	3,750	Ar. Game & Fish
T. 13 N., R. 7 E, Sec. 19, Lot 1; Sec. 30, Lot 1; T. 14 N., R. 6 E., Sec. 3, Lots 2, 3, 4, 5, 6; Sec. 4, Lot 1, 12; Sec. 9, Lot 16, 17; Sec. 10, Lot 13; Sec. 15, Lots 1, 2, 4, 6; Sec. 22, Lots 4, 7, 8, 12, 14, 19, 20; T. 14 N., R. 7 E., Sec. 21, Lots 4, 5, 12, 13; T. 15 N., R. 6 E., Sec. 13, Lots 1, 2, 3, 4, 5, 6, 11, 12, 13, 14; Sec. 17, Lot 2, Sec. 22, Lot 10; Sec. 23, Lots 1,4,5; Sec. 24, Lot 5; Sec. 27, Lot 5, 9; Sec. 33, Lot 5; Sec. 34, Lots 5, 6 T. 15 N., R. 7 E, Sec. 6, Lots 1, 2, 3, 5; Sec. 7, Lots 2, 5; T. 16 N., R. 7 E., Sec. 30, Lots 1, 2, 4; Sec. 31, Lots 1, 6, 10			
T. 9 N., R. 7 W., Sec. 26, FRL. W2SE,	White	80	Ar. Game & Fish
T. 12 N., R. 15 W., Sec. 15, W2NE	Van Buren	80	Ar. Game & Fish
T. 14 N., R. 17 W., Sec. 35, W2NE	Searcy	40	Ar. Game & Fish
T. 15 N., R. 10 W., Sec. SESE	Stone & Izard	40	Ar. Game & Fish
T. 17 N., R. 1 W., Sec. 4, Lot 1; & Sec. 5, Lot 1	Randolph & Stone	9.05	Ar. Game & Fish
T. 19 N., R. 28 W., Sec. 20, NESE	Benton	40	Ar. Game & Fish
T. 20 N., R. 12 W., Sec. 8, NENE, N2SENE; & Sec. 9, N2NW	Baxter	140	Ar. Game & Fish
T. 20 N., R. 14 W., Sec. 31, SWNE, NESW, NWSE, S2SW	Baxter	200	Ar. Game & Fish
T. 20 N., R. 14 W., Sec. 32 SWNW, NENW	Baxter		Ar. Game & Fish
T. 20 N., R. 15 W., Sec. 4, NWSE, SWSE, SESW	Marion	120	Ar. Game & Fish
T. 20 N., R. 16 W., Sec. 33, E2W2NE, E2NESW, E2NWSE, SWNWSE.	Marion	90	Ar. Game & Fish

TABLE A-3. ARKANSAS - WITHDRAWN LANDS

LEGAL DESCRIPTION	COUNTY	ACRES	HOLDING AGENCY
T. 1 N., R. 22 W., SEC. 2, N2NE, N2NW, N2SW, SWNE; SEC. 3, SWNW, NWSW, SWSW; SEC. 4, NE, SWNW, SESE; SEC. 5, SENE; SEC. 7, W2SE; SEC. 8, NE, N2SE; SEC. 9, N2NE; SEC. 16, NW, NWSW; SEC. 17, NWNW, S2NW, N2SW, NWSE; SEC. 19, W2NE, E2NW, NESW; SEC. 21, S2SW, SEC. 24, S2NE; SEC. 25, NWNE, NWNW, N2SW, NWSE; SEC. 26, NENE, NWNW, S2NW; SEC. 27, NESW; SEC. 28, N2NW, NESW; SEC. 30, W2NW; SEC. 31, NWSE, NWNE, S2SE; SEC. 32, E2NW, N2SW; SEC. 33, NE, NWSE; SEC. 34, NWSW, SWNW; SEC. 36, S2SE; T. 1 S., R. 20 W., Sec. 7 SENW, SESW; SEC. 30, S2NW, N2SW; SEC. 31, N2NE T. 1 S., R. 21 W., SEC. 1, SWSW; SEC. 10, SWSE, SEC. 11, NWNW; SEC. 12, S2NW; SEC. 13, SENW; SEC. 14, SWNW; SEC. 15, NW, NWSE; SEC. 16, E2E2; SEC. 19, NWNE, N2NW, SWNW, SESW, NESE; SEC. 20, NENW; SEC. 21, SESW; SEC. 22, SWNE, SESW, S2SE; SEC. 23, SWNE, SESW, S2SE; SEC. 25, S2NE, SWSW, SWSE; SEC. 27, SWNE, NW; SEC. 28, NWNE, SENE, N2NW, S2SW, SESE; SEC. 29, SWSE; SEC. 31, SWSW; SEC. 32, N2NE, SWSW; SEC. 33, NENE, SWNE, N2NW, SENW; SEC. 35, SESE; SEC. 36, NENW, NWSW, N2SE;	Garland & Montgomery	16,384	DEPT. OF THE ARMY & U.S. FOREST SERVICE
T. 1 S., R 23 W., SEC. 6, SWSE; SEC. 7, E2NW, NESW, NWSE; SEC. 11, N2NE, NENW, SWSE, E2SE; SEC. 12, W2SW; SEC. 13, S2SE; SEC. 14, NENE; SEC. 15, SWSE; SEC. 16, SWSE, E2SE; SEC. 18, NWNE, NENW, SWNW, SENW, NWSW, NESW, SWSW; SEC. 21, NWNE; SEC. 22, W2NE; SEC. 23, SWNE, SENW, NESE, S2SE; SEC. 26, NESW, SWSW; SEC. 27, SENE, NESW, NESE; SEC. 28, SWNW, SEC. 29, SENE, SEC. 30, SWSW, SWSE; SEC. 34, NWNW, SESE; SEC. 35, S2NE, SWSW; T. 1 S., R. 24 W., SEC. 13, SESE; SEC. 16, S2SE; SEC. 21, SENW, SEC. 22, NENW, SWSW; SEC. 23, NENE, SEC. 24, SWSW, SESW; SEC. 25, SESE; SEC. 27, W2SW, SESW; SEC. 28, SWNE, NWSW; SEC. 29, SENE; SEC. 32, SENE; SEC. 33, N2SE, N2SW; SEC. 34, NWSW; T. 2 S., R. 21 W., SEC. 1, E2NW; SEC. 2, N2NE, NENW/ SEC. 3, NENE, SWNE, SENW; SEC. 4, NWSE; SEC. 5, NWSW, SWSW, SESW, SWSE; SEC. 6, NENE, W2SW; SEC. 7, E2SE; SEC. 8, SWNE, SENW, W2SW; SEC. 9, NWNW; SEC. 17, S2NE, NW; SEC. 18, E2NE, SWNE, SENW, N2S2; T. 2 S., R. 22 W., SEC. 4, S2SW, E2SE; SEC. 5, NESW; SEC. 7, N2S2; SEC. 8, SENE, N2S2; SEC. 9, NE, NESW, NWSE; SEC. 10, NWSE, SESE, SWSE; SEC. 12, E2NE, NESE; SEC. 13, NENW, S2N2, N2S2; SEC. 14, NENE, S2NE, SWNW, SENW; SEC. 16, E2, E2SW; SEC. 20, S2NE, N2SE, SWSE; SEC. 21, NWNE, NW, N2SW, SWSE, NESE; SEC. 22, SENW, NENW, N2SW, NWSE; SEC. 28, NWNE, N2NW;			
T. 2 S., R. 23 W., SEC. 1, SWSW, NESE, W2SE; SEC. 8, SENE, W2NE, E2NW, NWNW, SWSW; SEC. 10, SENE, NENW; SEC. 11, NWNE, SENE, SWNE, SESW, E2SE, W2SE; SEC. 12, W2NE, NW, W2SW,N2SE; SEC. 16, NE, N2NW, SENW, E2SE; SEC. 18, SWSW; SEC. 20, NESE; SEC. 21, NENE; T. 2 S., R. 24 W., SEC. 9, E2SE; SEC. 10, S2SE, SESW, SWSW; SEC. 11, SWSW, SEC. 13, NENE; SEC. 14, N2NW; SEC. 16, ALL; SEC. 17 SESE			

LEGAL DESCRIPTION	COUNTY	ACRES	HOLDING AGENCY
T. 18 N., R., Sec. 6, SWSW, Lot 1, W2 T. 18 N., R. 11 W., SEC. 6, SWSW, lot 1, W2; T. 18 N., R. 12 W., SEC. 1 S2NE, N2SE, NESW; SEC. 4, LOT 1, W2; SEC. 5, LOT 2, E2; SEC. 9, NESW; SEC. 10, SWNW, NWSE, E. OF RIVER; SEC. 11, N2NW, E2SW, S2SE; SEC. 12, NESW; SEC. 13, S2SW; SEC. 27, NWNESW; SEC. 28, S2SE; SEC. 33, SENE, SEC. 34, LOT 2, NWNW, S2NW, SWSW, E2SE; SEC. 36, NWNW; T. 19 N., R. 11 W., Sec. 6, Lot 2, W2; Sec. 9, W2NE; SEC. 10, SENW; SEC. 17, SENE, NESE; SEC. 19, SENE, NESE; SEC. 20, NWSW; SEC. 21, NENE; SEC. 22, S2SENE; SEC. 27, NWNW; SEC. 29, NWNW, SEC. 30, S2SW; SEC. 33, SESW;	Baxter, Fulton, AR & Ozark, MO	5,367.585	CORPS OF ENGINEERS
T. 19 N., R. 12 W., SEC. 3, LOT 2 IN NW; SEC. 5, NESW; SEC. 13, SWSE; SEC. 14, NE, SESE, NORTH OF RIVER; SEC. 15, NESE; SEC. 21, NENW; SEC. 22, S2SE, SESW; SEC. 23, N2SW, SWSW, SENE; SEC. 24, SWSW, NWSW, EAST OF RIVER; SEC. 25, NESE; SEC. 26, SESW; T. 20 N., R. 11 W., SEC. 6, SESW; SEC. 32, SWNW T. 20 N., R. 12 W., SEC. 1, NWNW; SEC. 2, SESW; SEC. 4, W2SW, SOUTH OF RIVER; SEC. 6, W2NW, NWSW; SEC. 8, LOT 1, W2NE, S2SENE, NESE; SEC. 9, W2SW; SEC. 10, NESE; SEC. 14, SWSW, SEC. 20, SENE; SEC. 21, SWSW; SEC. 27, N2NW; SEC. 28, E2SW, SWSE; SEC. 33, N2NW, W2SW, NWNE, S2NE, N2SE, SESE; T. 20 N., R. 13 W., SEC. 1, SENE; SEC. 15, NWNE T. 21 N., R. 12 W., SEC. 10, ALL; SEC. 15, NENE, SWSW; SEC. 20, SWSE; SEC. 21, NENE; SEC. 29, SE; SEC. 31, SWSE, SESW; SEC. 32, NWSE; SEC. 33, NW, LYING SOUTH AND WEST OF RIVER;.			
T.3 S., R. 28 W., Sec. 31, S2; Sec. 32, SW	Polk	504.22	FOREST SERVICE
T. 4 N., R. 27 W., Sec. 9, NENE; Sec. 10, W2NWNW	Scott	60.00	FOREST SERVICE
T. 4 S., R. 28 W., SEC. 26, SWSWNW, S2N2SWNW, N2NEWNW, N2NWSW; Sec. 27, SWNE, NWNWSE, S2NW, N2N2N2WW, S2S2NWSW; Sec. 28, S2SENENE, SESWNENE, E2SWNE, E2W2SENE, N2NENESE, NENWNESE	Polk	330.00	FOREST SERVICE
T. 11 N., R. 9 W., Sec. 29, WNW; T. 11 N., R. 10 W., Sec. 6, SW SENW; T. 11 N., R. 10 W., Sec. 28, NENW; T. 11 N., R. 11 W., Sec. 11, NESENE, E2NWSENE, NESWSENE, N2SENE; T. 11 N., R. 12 W., Sec. 1, E2NWNE; SEC. 28, NENE FRAC. E OF RIVER	Cleburne/ Van Buren	157.81 18.53	CORPS OF ENGINEERS
T. 11 N., R. 17 W., Sec. 35, SENW T. 11 N., R. 21 W., Sec. 20, SESW; T. 12 N., R. 18 W., Sec. 24, SENW; T. 12 N., R. 20 W., Sec. 25, SENE; Sec. 26, NENE; T. 12 N., R. 23 W., Sec. 2, SWNE, SESE; T. 12 N., R. 27 W., Sec. 24, NENW; T. 12 N., R. 28 W., Sec. 24, N2SE; T. 14 N., R. 18 W., Sec. 19, SWSE; Sec. 30, NENW; T. 15 N., R. 11 W. Sec. 4, NWNW, W2SW, SWNE, SESE; T. 16 N., R. 12 W., Sec. 13, E2NE, SENW; SEC. 15, SESW, E2SW T. 17 N., R. 11 W., Sec. 29 NENE; T. 17 N., R. 13 W., Sec. 28, E2SW;	Van Buren & Stone	2,271.7	FOREST SERVICE

LEGAL DESCRIPTION	COUNTY	ACRES	HOLDING AGENCY
T. 11 N., R. 17 W., Sec. 35, SENW; T. 11 N., R. 21 W., Sec. 20, SESW; T. 12 N., R. 23 W., Sec. 2, SWNE, SESE; T. 12 N., R. 18 W., Sec. 24, SENW; T. 12 N., R. 20 W., Sec. 25, SENE; Sec. 26, NENE; T. 12 N., R. 27 W., Sec. 24, NENW; T. 12 N., R. 28 W., Sec. 24, N2SE; T. 14 N., R. 18 W., Sec. 19, SWSE; Sec. 30, NENW; T. 15 N., R. 11 W., Sec. 4, NWNW, W2SW, SWNE, SESE; T. 16 N., R. 12 W., Sec. 13, E2NE, SENW; Sec. 15, SESW, E2SW; T. 17 N., R. 11 W., Sec. 29, NENE; T. 17 N., R. 13 W., Sec. 28, E2SW;	Baxter and Stone	2,271.71	FOREST SERVICE
T. 15 N., R. 17 W., Sec. 3, NENE	Searcy	43.03	FOREST SERVICE
T. 15 N., R. 18 W., Sec. 8, NWNW; Sec. 10, NWNE;	Searcy	40	NATIONAL PARK SERVICE
T. 15 N., R. 17 W., Sec. 3, NENE; T. 15 N., R. 18 W., Sec. 8, NWNW; Sec. 10, NWNE; T. 16 N., R. 19 W., Sec. 25, SWSE; T. 16 N., R. 22 W., Sec. 1, S2SW, SWSE, NENE; Sec. 2, S2SE; Sec. 7, SENW, SWNE; Sec. 12, NENW, SWSE; Sec. 17, NWSE; T. 17 N., R. 14 W., Sec. 2, S2N2SW; T. 17 N., R. 21 W., Sec. 29, SWSW; T. 18 N., Sec. 14 W., Sec. 34, SESE	Newton	723	NATIONAL PARK SERVICE
T. 17 N., R. 14 W., Sec. 2, S2N2SW .	Marion	40	NATIONAL PARK SERVICE
T. 18 N., R. 14 W., Sec. 32, SESE; Sec. 34, SESE	Baxter	80	NATIONAL PARK SERVICE
T. 19 N, R. 11 W., Sec. 33, E2SESW	Baxter	10.18	CORPS OF ENGINEERS
T. 19 N., R. 28 W., Sec. 1, and 18, E2SW	Benton	80	CORPS OF ENGINEERS
T. 20 N., R. 14 W., Sec. 17, E2NENE, NWSW(Left Bank); Sec. 18, NW, N2SE (Left Bank);	Marion	4,992.03	CORPS OF ENGINEERS

LEGAL DESCRIPTION	COUNTY	ACRES	HOLDING AGENCY
T. 20 N., R. 15 W., SEC. 1, SWSW, NWSE (Right Bank); SEC. 2, SWNE, NESE (Right Bank); SEC. 3, E2NESE (Right Bank); SEC. 4, SESE (Left Bank); SEC. 5, NENW, NWNE, S2SW, W2SE (Left Bank); SEC. 7, SENW (Right Bank), SWNE (Left Bank); SEC. 8, W2 (Left Bank); SEC. 9, S2NE, SE (Left Bank); SEC. 10, NENE, SWNE, SESE (Left Bank); SEC. 11, SWNE (Left Bank); SEC. 13, SWNW (Left Bank); SEC. 14, SWNE, W2SW, SENE (Left Bank); SEC. 18, NWNW, FRAC. (Left Bank); SEC. 23, SENE, FRAC. (Left Bank); SEC. 24, S2NW, W2SE FRAC. (Left Bank); T. 20 N., R. 16 W., SEC. 2, FRAC. N2 (Right Bank); SEC. 3, SWSE (Right Bank); SEC. 4, NWSW (Left Bank); SEC. 5, SWSE (Left Bank); SEC. 6, SESW, NESE (Right Bank); SEC. 20, N2SWSE (Left Bank); SEC. 21, S2SWNE (Left Bank); SEC. 22, SESE (Left Bank); T. 20 N., R. 17 W., Sec. 1, SWSE (Right Bank); Sec. 11, W2SWNE (Right Bank); Sec. 12, NENE (Right Bank); T. 21 N., R. 15 W., SEC. 22, S2SESE (Left Bank); SEC. 28W2SENE (Left Bank); SEC. 29, NWSE (Left Bank); SEC. 32, SESW, W2SENE (Left Bank); SEC. 33, SWNE (Left Bank); T. 21 N., 16 W., SEC. 23, SWSW (Left Bank); SEC. 26, N2NESW, W2NWSW (Left Bank); SEC. 27, N2NENE, S2SENE, NESE (Left Bank), SESENW, S2SWNE (Left Bank); SEC. 28, SENE (Right Bank), W2SENE, SWNF (Left Bank); SEC. 29, NWNW (Left Bank); SEC. 33, W2NE, N2SE, S2NW, FRAC. (Left Bank) C. 34, N2NW (LB);..			
T. 21 N., R. 17 W., Sec. 15, SE, SENE (Right Bank); SEC. 18, FRAC. W2; SEC. 20, NENW, NESE (Right Bank); SEC. 21, SENE, S2NWNE (Right Bank); SEC. 22, SWSW, SENE (Right Bank), NWNW (LB); SEC. 23, FRAC. NW, SWNW, NWSW (Right Bank); SEC. 24, FRAC. W2NE, E2NW; SEC. 28, FRAC. NE; SEC. 29, N2SWSE (Right Bank); SEC. 30, S2N2NW, SWNW, N2SENW (Right Bank); SEC. 32, FRAC. NE (Left Bank) SEC. 34, W2NENW (Right Bank); T. 21 N., R. 18 W., SEC. [illegible], SENE T. 21 N., R. 18 W., Sec. 23, Frac. SENE (Left Bank); Sec. 24, S2NWNW (Left Bank); SEC. 25, N2NESW (Right Bank), T. 21 N., R. 19 W., Sec. 11, Frac. SESW (Right Bank), Frac. E2SW (Right Bank); Sec. 13, Frac. SE (Left Bank); Sec. 14, Frac. NENW (Right Bank), Frac. N2NE, FRAC. NWSENE (Right Bank)			
T. 20 N., R. 16 W., Sec. 2, N2, S2NWSWSW, SENENWSWSW, S3/4SWSWSW, NESWSWSW, E2NENESE, PT. NESE, S3/4E2SWSE, SESWSE, SESE, Sec. 3, SWSE, Sec. 4, NWSW, Sec. 5, SWSE, Sec. 6, SESW, NESE	Marion	758.75	CORPS OF ENGINEERS
T. 21 N., R. 16 W., Sec. 8, NE, SE FRAC. NORTH OF RIVER; Sec. 9, Lot 8 NE; Sec 20, N2SWSE; Sec. 21, S2SWNE; Sec. 22, SESE; Sec. 23, SWSE; Sec. 26, N2NESW. W2NWSW; Sec. 27, N2NENE, S2SENE, NESE, SESENW, S2SWNW; Sec. 28, SENE, W2SENE, E2SE, W2NWNW, SWNW; Sec. 29, NWNW; Sec. 32, SESW, W2SENE; Sec. 33, W2NE, SENE, NENW, PT. NWNW, PT. SWNW, PT. SENW, NESW, NWSW, NENENESE, E2NWSE, S2SENESE, NEN2SESE, E2NWSE, SWNWSE, N2SE, S2NW; Sec. 34, N2NW	Marion	420	CORPS OF ENGINEERS, AND ARKANSAS GAME & FISH COMMISSION
T. 21 N., R. 16 W., Sec. 33, E2W2NE, E2NESW, E2NWSE, SWNWSE	Marion	90	CORPS OF ENGINEERS
T. 21 N., R. 17 W., Sec. 15, SE, SENE; 18, FRAC. W2; 20, NENW, NESW; 21, SENW, S2NWNE; 22, SWSW, NWSW; 23, FRAC. NW; 24, FRAC. W2NE, E2NW; 28, FRAC. NE; 29, N2SWSE; 30, SENW, S. of River; 32, NE; 34, W2NENW,	Marion		CORPS OF ENGINEERS

LEGAL DESCRIPTION	COUNTY	ACRES	HOLDING AGENCY
T. 13 N., R. 18 W., SEC. 6, S2SWSE, S2N2SWSE			FOREST SERVICE
T. 18 N., R. 12 W., SEC. 11, LOT 2; T. 19 N., R. 12 W.,Sec. 1, NESW; SEC. 3, NWNW; SEC. 9, E2SE; SEC. 13 S2SE; SEC. 22, NWSW, SESW, S2SE; SEC. 23, N2SW, SWSW; SEC. 24, W2SW; SEC. 34, NWNE, NENW, E2SE; T. 20 N., R. 12 W., SEC. 3, W2NW, NWSW; SEC. 8, E2; SEC. 9, E2NW, SWSW; SEC. 19, NWSW; SEC. 20, SENE, W2NW;	Baxter	1,550	DEPT. OF ARMY
T. 21 N., R. 12 W., SEC. 10, ALL T. 21 N., R. 12 W., SEC. 15, NENE T. 21 N. R 12 W., SEC. 33, SWNE	Ozark Co., MO Baxter Co., AR Baxter Co., AR		
T. 21 N., R. 17 W., SEC. 20, NENW	Marion	40	DEPT. OF ARMY
T. 21 N., R. 17 W., SEC. 30, SENW	Marion	40	DEPT. OF ARMY
T. 18 N., R. 12 W., SEC. 1S2NE, N2SE T. 20 N., R. 27 W., Sec. 10, S2NENW; Sec. 15, NENW; Sec. 20, SWNW; T. 20 N., R. 28 W., SEC. 36, NESE;	CARROLL	260	CORPS OF ENGINEERS
T. 11 N., R. 9 W., Sec. 29, SWNW; T. 11 N., R. 10 W., Sec. 6, SW; Sec. 28, NENW; T. 11 N., R. 11 W., Sec. 11, NESENE, E2NWSENE, NESWSENE, N2SESENE; T. 11 N., R. 12 W., Sec. 1, E2NWNE;Sec. 28, NENE Frac. East of River.	Cleburne	157.91	LITTLE ROCK CORPS OF ENGINEERS

TABLE A-4. ARKANSAS - LANDS OF UNCERTAIN TITLE

COUNTY	ACRES	LEGAL DESCRIPTION*
Baxter	40	T. 18 N., R. 14 W., Sec. 24, SWSE
Baxter	40	T. 18 N., R. 14 W., Sec. 24, SENW
Baxter	20	T. 19 N., R. 11 W., Sec. 33, E2SESW
Baxter	40	T. 21 N., R. 14 W., Sec. 31, SENW
Baxter	40	T. 21 N., R. 14 W., Sec. 32, SWNW
Baxter	40	T. 21 N., R. 14 W., Sec. 32, SENW
Benton	80	T. 19 N., R. 28 W., Sec. 18, E2SW
Benton	80	T. 19 N., R. 30 W., Sec. 29, W2NE
Benton	35	T. 19 N., R. 34 W., Sec. 15, FRAC W2
Clark	40	T. 06 S., R. 22 W., Sec. 10, SENE
Clark	40	T. 07 S., R. 22 W., Sec. 2, NESE
Cleburne	40	T. 09 N., R. 09 W., Sec. 27, NWSE
Cleveland	40	T. 09 S., R. 09 W., Sec. 27, NWSE
Columbia	160	T. 16 S., R. 22 W., Sec. 24, SE
Cross	40	T. 07 N., R. 03 E., Sec. 25, NWNE
Dallas	40	T. 09 S., R. 17 W., Sec. 6, NWNW
Franklin	40	T. 11 N., R. 26 W., Sec. 8, NESW
Fulton	40	T. 21 N., R. 10 W., Sec. 30, SWSE
Independence	80	T. 13 N., R. 07 W., Sec. 20, E2SW ,(SOUTH OF RIVER)
Izard	120	T. 16 N., R. 07 W., Sec. 4, SWNE,SWSE,SESE
Izard	40	T. 16 N., R. 10 W., Sec. 7, SWNE
Johnson	80	T. 09 S., R. 22 W., Sec. 7, NWNW,SWSE
Lafayette	80	T. 17 S., R. 24 W., Sec. 19, NWSW,NWSE
Lafayette	40	T. 17 S., R. 24 W., Sec. 20, SWSE
Madison	40	T. 14 N., R. 26 W., Sec. 35, SESW
Marion	40	T. 17 N., R. 15 W., Sec. 22, NWSW
Marion	120	T. 19 N., R. 16 W., Sec. 6, NENW,W2NW
Marion	84	T. 19 N., R. 17 W., Sec. 6, NWSW
Marion	40	T. 19 N., R. 18 W., Sec. 1, NWNE
Marion	40	T. 20 N., R. 15 W., Sec. 4, SESE
Marion	40	T. 20 N., R. 16 W., Sec. 31, NSE
Marion	80	T. 21 N., R. 15 W., Sec. 24, S2NE
Marion	80	T. 21 N., R. 15 W.,Sec. 13, SWSE,SESW
Marion	40	T. 21 N., R. 16 W., Sec. 29, NENW
Marion	90	T. 21 N., R. 16 W., Sec 33, E2W2NE, E2NESW, E2NWSE, SWNWSE
Marion	40	T. 19 N., R. 18 W., Sec. 1, NENE
Marion	40	T. 21 N., R. 17 W., Sec. 30, SENW, (SOUTH OF RIVER)
Mississippi	17	T. 13 N., R. 08 E., Sec. 9, SESW
Nevada	40	T. 12 S., R. 20 W., Sec. 32, SESE
Newton	40	T. 14 N., R. 23 W., Sec. 5, NENW
Newton	40	T. 16 N., R. 19 W., Sec. 7, SWNW
Ouachita	110	T. 15 S., R. 17 W., Sec. 4, N2NW,SESW
Poinsett	41	T. 12 N., R. 06 E., Sec. 16, LOTS 1,5
Searcy	40	T. 13 N., R. 15 W., Sec. 35, NWS;
Searcy	40	T. 13 N., R. 16 W., Sec. 3, SWSW
Searcy	40	T. 13 N., R. 17 W., Sec. 31, NENE

COUNTY	ACRES	LEGAL DESCRIPTION
Searcy	40	T. 13 N., R. 17 W., Sec. 2, SWSW
Searcy	40	T. 14 N., R. 17 W., Sec. 24, NWSW
Sebastian	160	T. 07 N., R. 31 W., Sec. 32, NESW
Sharp	40	T. 16 N., R. 05 W., Sec. 21, SENE
Sharp	40	T. 16 N., R. 06 W., Sec. 22, SESE
Sharp	80	T. 19 N., R. 03 W., Sec. 29, W2NE
Sharp	80	T. 20 N., R. 03 W., Sec. 5, NESW,SENW
Sharp	80	T. 20 N., R. 03 W., Sec. 5, SWNW
Sharp	80	T. 20 N., R. 03 W., Sec. 19, S2NW
Stone	40	T. 16 N., R. 10 W., Sec. 7, SWNW
Van Buren	40	T. 11 N., R. 17 W., Sec. 24, SENW
Van Buren	10	T. 12 N., R. 16 W., Sec. 20, NENESE
Van Buren	80	T. 12 N., R. 16 W., Sec. 20, NENE,NESE
Van Buren	80	T. 13 N., R. 14 W., Sec. 28, N2NW
Van Buren	80	T. 13 N., R. 15 W., Sec. 35 , NESE
Washington	40	T. 13 N., R. 29 W., Sec. 28 , SWSE
Washington	40	T. 13 N., R. 29 W., Sec. 3, NESE
White	40	T. 08 N., R.08 W., Sec. 5, SWSW

*All legal descriptions are Fifth Principle Meridian

TABLE A-5. LOUISIANA - PUBLIC DOMAIN LANDS

Name of Tract	Acres	County/ Parish	Legal Description
Louisiana			Louisiana Meridian
Black Lake	135	Natchitoches	T. 12 N., R. 7 W., Sec. 32, Lots 5, 6 ,8 ,11 and 12.
Rocky Bayou	21	Desoto	T. 11 N., R. 12 W., Sec. 12, Lot 2
Big Saline Bayou	158	Rapides	T. 5 N., R. 3 E., Sec 26, NW¼
Duck Lake	64	St. Martin	T. 14 S., R. 11 E., Sec. 26, Lots 8, 9 and 10

TABLE A-6. LOUISIANA - RECREATION AND PUBLIC PURPOSE PATENTED LANDS

LEGAL DESCRIPTION	PARISH	ACRES	HOLDING AGENCY
T. 16 N., R. 7 W., Sec. 15, NESW	Bienville, LA Meridian	39.88	Bieneville Parish
T. 17 N., R. 10 W., Sec. 14, lots 9 - 15; Sec. 23, lot 1; Sec. 14, lots 6 & 7	Webster, LA Meridian	165.79	LA. State Parks and Recreation Comm.
T. 17 S., R. 4 E., Sec. 10, Lots 4 & 5; Sec. 15, lot 1	St. Mary, LA Meridian	39.88	Bienville Parish Police Jurisdiction

TABLE A-7. LOUISIANA - WITHDRAWN LANDS

LEGAL DESCRIPTION	PARISH	ACRES	HOLDING AGENCY
T. 9 S., R. 9 E., Sec. 29, Lot 15; T. 10 S., R. 9 E., Sec. 36, Lot 12; T. 14 S., R. 10 E., Sec. 24, Lot 1; T. 14 S., R. 11 E., Sec. 22, Lot 1; T. 14 S., R. 16 E., Sec. 13, SENW; T. 22 S., R. 32 E., Sec. 16, Lot 16; T. 24 S., R. 31 E., Sec. 23, Frac. Sec.	St. Martin, LA Mer.	347.75	Corps of Engineers
T. 20 N., R. 11 W., Sec. 3, Lots 11 & 15; Sec. 12, Lot 17; Sec. 13, Lot 17; All	Bossier, LA Mer	5.4	Corps of Engineers
T. 20 N., R. 11 W., Sec. 13, Lot 16; T. 24 S., R. 30 E., Sec. 8, NW, NE, SW, SE;	Bossier, LA Mer	200.8	Corps of Engineers
T. 9 S., R. 9 E., Sec. 29, Lot 15; T. 10 S., R. 9 E., Sec. 38, Lot 12; T. 14 S., R. 10 E., Sec. 24, Lot 1; T. 14 S., R. 11 E., Sec. 22, Lot 1; T. 14 S., R. 16 E., Sec. 13, SENW	St. Martin, St. Mary, LaFourche, LA Mer	347.75	Corps of Engineers

LEGAL DESCRIPTION	PARISH	ACRES	HOLDING AGENCY
T. 22 S., R. 32 E., Sec. 16, Lot 16; T. 24 S., R. 31 E., Sec. 23, Lot 1 - Frac.;			
T. 23 S., R. 31, Sec. 7, All; Sec. 11, All; Sec. 13, All T. 24 S., R. 31 E., Sec. 16, All	Plaqueminos, St. Helena Mer.	49.06	Corps of Engineers
T. 20 N., R. 11, Sec. 20, Lot 9; T. 22 N., R. 11 W., Sec. 4, Lot 4; Sec. 5, Lots 3 & 4;	Bossier, LA Mer	4.12	Corps of Engineers
T. 19 S., R. 20 E., Sec. 31, all T. 20 S., R. 18 E., radial secs. 38 to 48, inclusive, all; T. 20 S., R. 19 E., radial secs. 1 - 11, inclusive, 15, 16, 17, all; sec. 20, SW; Sec. 24, all southeast of Main Pass; Sec. 25, all; Sec. 26, all southeast of Main Pass; Sec. 29, NE, S2; Sec. 33, W2NW and NWSW; Sec. 34, all southeast of Main Pass; Secs. 35 & 36, all; T. 20 S., R. 20 E., Sec. 5, all; Sec. 7 all southeast of Main Pass; Secs. 8, 9, 15, 16, 17, all; Sec. 18, all southeast of Main Pass and that part of the SWNW of Main Pass; Secs. 19 - 23, inclusive; Secs. 26 - 32, inclusive, all; T. 21 S., R. 18 E., radial secs. 1 - 7, inclusive, all; T. 21 S., R. 19 E., radial secs. 1 - 15,, inclusive, 22 - 29, inclusive, 33, 34, 35, 37, 38, 40, 41, 43, 45, 48, and 49, all;	Plaquemines, St. Helena Meridian	41,550	Fish and Wildlife Service
T. 21 S., R. 20 E., all fractional; T. 22 S., R. 19 E., radial secs. 1, 3, 5, 7, and 10 - 14, inclusive, all;			
T. 21 S., R. 20 E., Sec. 4, 5, 9, 19	Plaquemine, St. Helena Mer.	640	

TABLE A-8. LOUISIANA - LANDS OF UNCERTAIN TITLE

PARISH	ACRES	LEGAL DESCRIPTION
Acadia	2	Louisiana Meridian: T. 7 S., R. 2 W., Sec. 14, Lot 4
Ascension	1	St. Helena Meridian: T. 10 S., R. 2 E., Sec. 83
Assumption	4	Louisiana Meridian: T. 14 S., R. 12 E., Sec. 1
Bossier	3	Louisiana Meridian: T. 16 N., R. 10 W., Sec. 29, Lot 1
Bossier	29	Louisiana Meridian: T. 16 N., R. 10 W., Sec. 12, Lot 12
Bossier	2	Louisiana Meridian: T. 16 N., R. 10 W., Sec. 17, Lot 1
Bossier	65	Louisiana Meridian: T. 16 N., R. 10 W., Sec. 30, Lots 7, 8, 12,
Bossier	144	Louisiana Meridian: T. 16 N., R. 10 W., Sec. 30, Lots 6, 9, 10, 11 & 13
Caddo,	1	Louisiana Meridian: T. 17 N., R. 14 W., Sec. 8, Lot 1
Caddo,	1	Louisiana Meridian: T. 18 N., R. 14 W., Sec. 14, Lot 19
Caddo,	80	Louisiana Meridian: T. 18 N., R. 14 W., Sec. 23, E1/2NW
Caddo	40	Louisiana Meridian: T. 17 N., R. 13 W., Sec. 19, NWNE
Calcasieu		Louisiana Meridian: T. 10 N., R. 9 W., Sec. 13, Lots 17 & 18
Caldwell	200	Louisiana Meridian: T. 14 N., R. 4 E., Sec. 14, SE, SESW
Desoto	40	Louisiana Meridian: T. 12 N., R. 12 W., Sec. 31, SWSE
DeSoto	21	Louisiana Meridian: T. 11 N., R. 12 W., Sec. 2, Lot 2;
E. Baton Rouge	636	Louisiana Meridian: T. 5 S., R. 2 E., Sec. 64
E. Carroll	6	Louisiana Meridian: T. 20 N., R. 11 E., Sec. 28, Lot 2
Evangeline	640	Louisiana Meridian: T. 5 S., R. 2 W., Sec. 11, ALL
Grant	ALL	Louisiana Meridian: T. 6 N., R. 3 W., Sec. 20
Iberia	17	Louisiana Meridian: T. 12 S., R. 6 E., Sec. 79I
Iberia	17	Louisiana Meridian: T. 12 S., R. 8 E., Sec. 79
Iberia	19	Louisiana Meridian: T. 12 S., R. 6 E., Sec. 31
Jefferson	25	Louisiana Meridian: T. 15 S., R. 23 E., Sec. 17
LaSalle	60	Louisiana Meridian: T. 5 N., R. 3 E., Sec. 26, NW
LaSalle	641	Louisiana Meridian: T. 8 N., R. 4 E., Sec. 48, ALL
Morehouse	506	Louisiana Meridian: T. 21 N., R. 6 E., Sec. 38, ALL
Morehouse	1	Louisiana Meridian: T. 21 N., R. 5 E., Sec. 23, Lot 1
Natchitoches	884	Louisiana Meridian: T. 6 N., R. 4 W., Secs. 61, 65 & 68
Natchitoches	40	Louisiana Meridian: T. 8 N., R. 8 W., Sec. 28, SWSW
Natchitoches	135	Louisiana Meridian: T. 12 N., R. 7 W., Sec. 32, lots 5, 6, 8, 11 & 12
Natchitoches	25	Louisiana Meridian: T. 12 N., R. 8 W., Sec. 31
Natchitoches	834	Louisiana Meridian: T. 6 N., R. 4 W., Secs. 61, 65 & 68
Orleans	640	St. Helena Meridian: T. 21 S., R. 27 E., Sec. 24, ALL
Ouachita	134	Louisiana Meridian: T. 18 N., R. 4 E., Sec. 18, ALL
Plaquemine		St. Helena Meridian: T. 21 N., R. 26 E., Sec. 1
Plaquemine	640	St. Helena Meridian: T. 24 S. R. 30 E., Sec. 36
Plaquemine	640	St. Helena Meridian: T. 24 S. R. 31 E., Sec. 48, ALL
Plaquemine		St. Helena Meridian: T. 24 S. R. 31 E., Sec. 47, River lots 19, 21, 22
Plaquemine	400	St. Helena Meridian: T. 25 S., R. 30 E., Sec. 2, W2NE, NW, E2SW
Plaquemine	640	St. Helena Meridian: T. 24 S. R. 33 E., Sec. 30, ALL
Plaquemines	640	Louisiana Meridian: T. 24 S., R. 33 E., Sec. 30
Plaquemines	640	Louisiana Meridian: T. 24 S., R. 31 E., Sec. 48
Plaquemines	400	Louisiana Meridian: T. 25 S., R. 30 E., Sec. 2, W1/2 NE, NW, E1/2SW

PARISH	ACRES	LEGAL DESCRIPTION
Plaquemines		Louisiana Meridian: T. 21 S., R. 20 E., Sections 5, 9 & 19.
Plaquemines		Louisiana Meridian: T. 21 S., R. 21 E., Secs. 2, 3, 4, 25
Plaquemines	ALL	Louisiana Meridian: T. 25 S., R. 30 E., Secs. 3, 10, 16, ALL
Plaquemines		Louisiana Meridian: T. 24 S. R. 30 E., Section 46, SESE; Section 47, SWSW; SWNW & NENW, and River Lots 19, 21, & 22
Plaquemines		Louisiana Meridian: T. 20 S., R. 19 E., Secs. 10, 11, 12, 15, 16, 17, 32, 33 and 35,
Plaquemines		Louisiana Meridian: T. 21 S., R. 26 E., Sec. 1, ALL
Plaquemines	640	Louisiana Meridian: T. 24 S., R. 30 E., Sec. 36
Point Coupee	ALL	Louisiana Meridian: T. 4 S., R. 11 E., Secs. 39 & 40
Point Coupee	1	Louisiana Meridian: T. 5 S., R. 9 E., Sec. 58, ALL
Point Coupee	1	Louisiana Meridian: T. 5 S., R. 9 E., Sec. 58, ALL
Point Coupee	160	Louisiana Meridian: T. 4 S., R. 11 E., Secs. 39 & 40,ALL
Rapides	132	Louisiana Meridian: T. 4 N., R. 1 W., Sec. 74, ALL
St. Mary	228	Louisiana Meridian: T. 14 S., R. 9 E., Sec. 58, ALL
St. Mary		Louisiana Meridian: T. 13 S., R. 8 E., Sec. 14, Lot 6
St. John the Baptist	264	Louisiana Meridian: T. 12 S., R. 19 E., Sec. 34, Lots 1-6; NWSW; S1/2 SW
St. James	ALL	Louisiana Meridian: T. 13 S., R. 17 E., Sec. 63, ALL
St. Charles	17	Louisiana Meridian: T. 14 S., R. 21 E., Sec. 11, Frl.
St. Martin	40	Louisiana Meridian: T. 14 S., R. 11 E., Sec. 35, NENW
St. John the Baptist	46	Louisiana Meridian: T. 12 S., R. 19 E., Sec. 1, ALL
Vermillion	30	Louisiana Meridian: T. 13 S., R. 3 E., Sec. 31, Lots 5, 6, 8, 11 and 12
Vermillion	7	Louisiana Meridian: T. 14 S., R. 3 E., Sec. 45, ALL
Vermillion	1	Louisiana Meridian: T. 11 S., R. 4 E., Sec. 33, Lot 3
Vernon	40	Louisiana Meridian: T. 2 N., R. 10 W., Sec. 34, SENE
W. Feliciana	40	St. Helena Meridian: T. 1 S., R. 1 W., Sec. 9, NENE
W. Feliciana	3	St. Helena Meridian: T. 1 S., R. 4 W., Sec. 28, Lot 1; Sec. 34, Lot 2

Appendix B - Minerals

Reasonably Foreseeable Development of Federal Minerals

Petroleum

In determining the petroleum potential in the study area, the rating system outlined in the BLM Planning for Fluid Mineral Resources Handbook H-1624-1 (5/7/90) was used. There are four levels in this rating system: high, moderate, low, and no potential. These are defined as:

> High: Inclusion in an oil and gas play as defined by the USGS national assessment, or, in the absence of a play designation by USGS, the demonstrated existence of: source rock, thermal maturation, and reservoir strata possessing permeability and/or porosity, and traps. Demonstrated existence is defined by physical evidence or documentation in the literature.
> Moderate: Geophysical or geological indications that the following may be present: source rock, thermal maturation, and reservoir strata possessing permeability and/or porosity and traps. Geologic indication is defined by geological inference based on indirect evidence.
> Low: Specific indications that one or more of the following may not be present: source rock, thermal maturation, or reservoir strata possessing permeability and/or porosity and traps.
> None: Demonstrated absence of 1) source rock, 2) thermal maturation, 3) reservoir rock that precludes the occurrence of oil and/or gas. Demonstrated absence is defined by physical evidence or documentation in the literature.

Typically, the petroleum industry follows a general plan and process for all production sites, as follows: Preparation for the drilling process includes construction of a road, drilling pad, and reserve pit. Constructed access roads normally have a running surface width of approximately 30 feet; the length is dependent upon the well site location in relation to existing roads or highways. The average length of road construction will be about 1/2 of a mile. Therefore, 2 acres would be affected by road construction. Typically, 1 to 2 acres are cleared and graded level for the construction of the drilling pad for a shallow gas well. However, depending on the topography of the well site and access area this construction may require the creation of cut slopes and fill areas which may disturb a small amount of additional area. If the well is productive, we can estimate that another 2 acres may be affected by flowline construction. Therefore, the total disturbed area for drilling a well will be five to six acres. These disturbances are typical for both private or Federal Ownership well locations. The reserve pit excavation is usually about five feet deep and is lined with bentonite muds. Plastic or butyl liners (or its equivalent), that meet State standards for thickness and quality, are used on occasions when soils are determined incapable of holding pit fluids.

Petroleum resources are discussed on a tract-by-tract basis. This discussion includes the tract's geology, the potential for petroleum resources on the tract, and the potential for actual commercial development. The reasonably foreseeable development scenarios for each tract follows.

Arkansas

Long Mountain North and Long Mountain South Tracts, Baxter County
T. 21 N., R. 14 W., Section 19

Site Specific Petroleum Geology: Township 21 North, Range 14 West is located in the northwest corner of Baxter County, Arkansas. This area lies in the Ozark Uplift 50 miles north of the northeastern edge of the prolific gas producing Arkoma Basin. This township is located more than 90 miles from the nearest commercial gas production. The Pennsylvanian Atoka sandstones and the basal Pennsylvanian Hale Formation that are the major producing horizons in the Arkoma Basin are absent here. Lower Ordivician Jefferson City dolomite is at the surface. If drilling occurs, the primary objective would be the Cambrian age section.

As is the case in all remote areas that are this far from established production, substantial gas reserves would have to be developed to justify the laying of gas lines into the area to produce any gas discovered. This has not taken place to date in Baxter County.

Oil and Gas Resource Potential: This area in northern Baxter County, Arkansas is classified as having low potential for oil and gas reserves.

Oil and Gas Development Potential: This area can be classified as rank wildcat with low potential for gas and a low probability for drilling. Well depths will probably be less than 2000 feet. The primary objective would be the Cambrian age section. Spacing is typically 640 acres for a shallow gas well.

Drasco tract, Cleburne County
T. 12 N., R. 9 W., Section 33

Site Specific Petroleum Geology: Township 12 North, Range 9 West is located in the northern half of Cleburne County, Arkansas. This area lies on the northeastern edge of the prolific gas producing Arkoma Basin. However, this township is located more than 50 miles from the nearest commercial gas production. No exploratory oil and gas wells have ever been drilled in this area. The Pennsylvanian Atoka sandstones that are the major producing horizons in the Arkoma Basin are absent here. The basal Pennsylvanian Hale Formation is absent here. If drilling occurs, the primary objective would most likely be the Cambro-Ordovician carbonate section. The top of the Ordovician is at about 2500 feet.

As is the case in all remote areas that are this far from established production, substantial gas reserves would have to be developed to justify the laying of gas lines into the area to produce any gas discovered. This has not taken place to date in Cleburne County.

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Oil and Gas Resource Potential: This area in northern Cleburne County, Arkansas is classified as having moderate potential for oil and gas reserves.

Oil and Gas Development Potential: This areas can be classified as rank wildcat with moderate potential for gas and a low probability for drilling. Well depths will probably be less than 3500 feet. The primary objective would most likely be the Cambro-Ordovician carbonate section. Spacing is typically 640 acres for a shallow gas well.

Locust Mountain tract, Crawford County
T. 11 N., R. 31 W., Section 24

Site Specific Petroleum Geology: Township 11 North, Range 31 West is located in the central part of Crawford County, Arkansas. This area lies on the northern edge of the prolific gas producing Arkoma Basin. This area is located about 8 miles from the nearest commercial gas production. Only two exploratory oil and gas wells have been drilled in the township and both were unsuccessful. These wells ranged in depth from 990 feet to 2525 feet. The Pennsylvanian Atoka sandstones that are the major producing horizons in the Arkoma Basin are mostly absent here. The basal Pennsylvanian Atoka Formation is at the surface. If drilling occurs, the primary objective would most likely be the Pennsylvanian Hale Formation, Mississippian, Silurian-Devonian, and Cambro-Ordovician carbonate sections. The top of the Ordovician Arbuckle Formation is at about 3000 feet.

As is the case in all remote areas that are this far from established production, substantial reserves would have to be developed to justify the laying of gas lines into the area to produce any gas discovered. This has not taken place to date in this area of Crawford County.

Oil and Gas Resource Potential: This area in southern Crawford County, Arkansas is classified as having moderate potential for oil and gas reserves.

Oil and Gas Development Potential: This area can be classified as wildcat with moderate potential for gas and a low probability for drilling. Well depths will probably be less than 3500 feet. The primary objectives would most likely be the Mississippian, Silurian-Devonian, and Cambro-Ordovician carbonate sections. Spacing is typically 640 acres for a shallow gas well.

Foster Branch tract, Fulton County
T. 21 N., R.10 W., Section 31

Site Specific Petroleum Geology: Township 21 North, Range 10 West is located in the northwest corner of Fulton County, Arkansas. This area lies in the Ozark Uplift 50 miles north of the northeastern edge of the prolific gas producing Arkoma Basin. This township is located more than 90 miles from the nearest commercial gas production. One exploratory well (dry hole) was drilled in the 1930's in Fulton County. The Pennsylvanian Atoka sandstones and the basal Pennsylvanian Hale Formation that are the major producing horizons in the Arkoma Basin are absent here. Lower Ordivician Jefferson City dolomite is at the surface. If drilling occurs, the primary objective would be the Cambrian age section.

As is the case in all remote areas that are this far from established production, substantial gas reserves would have to be developed to justify the laying of gas lines into the area to produce any gas discovered. This has not taken place to date in Fulton County.

Oil and Gas Resource Potential: This area in northern Fulton County, Arkansas is classified as having low potential for oil and gas reserves.

Oil and Gas Development Potential: This area can be classified as rank wildcat with low potential for gas and a low probability for drilling. Well depths will probably be less than 2000 feet. The primary objective would be the Cambrian age section. Spacing is typically 640 acres for a shallow gas well.

Redland Mountain Tract, Pike County
T. 5 S., R. 26 W., Section 11

Site Specific Petroleum Geology: Township 5 South, Range 26 West is located in northwestern Pike County, Arkansas. This area lies in the Ouachita Mountains Region over 30 miles south of the southern edge and outside of the prolific gas producing Arkoma Basin. The nearest commercial gas production is more than 50 miles away. Prolific Arkoma Basin gas producing formations are absent here. The Pennsylvanian Jackfork Sandstone and the Mississippian Stanley Shale are at the surface. The area is intensely folded and faulted. It lies south of early Paleozoic rocks that form the core of the Ouachita Mountains. Some hydrothermal mineralization and igneous activity has occurred in this county. If drilling occurs, the primary objective would be in the Mississippian or older section.

As is the case in all remote areas that are this far from established production, substantial gas reserves would have to be developed to justify the laying of gas lines into the area to produce any gas discovered. This has not taken place to date in Pike County.

Oil and Gas Resource Potential: This area in northern Pike County, Arkansas is classified as having low potential for oil and gas reserves.

Oil and Gas Development Potential: This area can be classified as rank wildcat with low potential for gas and a low probability for drilling. Well depths will probably be less than 10,000 feet. The primary objective would be the Mississippian and older age sections. Spacing is typically 640 acres for a gas well.

Point Peter Mountain, Calf Creek, Campbell Hollow, Bear Creek, Buffalo River, and Middle Fork Tracts, Searcy County
T. 15 N., R. 18W., section 3
T. 14 N., R. 18 W., Sections 11, 14
T. 14 N., R. 17 W., Section 31
T. 13 N., R. 17 W., Sections 20, 27

Site Specific Petroleum Geology: Townships 13 North ,14 North, and 15 North and Ranges 17 West and 18 West are located in the central and southern part of Searcy County, Arkansas. This area lies on the northeastern edge of the prolific gas producing Arkoma Basin. However, these townships are located more than 30 miles from the nearest commercial gas production. No exploratory oil and gas wells have ever been drilled in this area. Only four wells have been drilled in all the eight adjacent townships, an area covering 324 square miles and all were unsuccessful. These wells ranged in depth from 834 feet to 4836 feet. The Pennsylvanian Atoka sandstones that are the major producing horizons in the Arkoma Basin are absent here. The basal Pennsylvanian Hale Formation is absent here. If drilling occurs, the primary objective would most likely be the Cambro-Ordovician carbonate section. The top of the Ordovician is at about 1800 feet.

As is the case in all remote areas that are this far from established production, substantial gas reserves would have to be developed to justify the laying of gas lines into the area to produce any gas discovered. This has not taken place to date in Searcy County.

Oil and Gas Resource Potential: This area in central and southern Searcy County, Arkansas is classified as having moderate potential for oil and gas reserves.

Oil and Gas Development Potential: These areas can be classified as rank wildcat with moderate potential for gas and a low probability for drilling. Well depths will probably be less than 3500 feet. The primary objective would most likely be the Cambro-Ordovician carbonate section. Spacing is typically 640 acres for a shallow gas well.

West Fork tract, Van Buren County
T. 10 N., R.16 W., Section 9

Site Specific Petroleum Geology: Township 10 North, Range 16 West is located southern Van Buren County, Arkansas. This area lies on the northeastern edge of the prolific gas producing Arkoma Basin. This area is located about 10 miles from the nearest commercial gas production. Only two exploratory oil and gas wells have been drilled in the area and both were unsuccessful. These wells ranged in depth from 2000 feet to 4900 feet. The Pennsylvanian Atoka sandstones that are the major producing horizons in the Arkoma Basin are absent here. The basal Pennsylvanian Hale Formation is at the surface. If drilling occurs, the primary objective would most likely be the Mississippian, Silurian-Devonian, and Cambro-Ordovician carbonate sections. The top of the Ordovician is at about 3200 feet.

As is the case in all remote areas that are this far from established production, substantial reserves would have to be developed to justify the laying of gas lines into the area to produce any gas discovered. This has not taken place to date in Van Buren County.

Oil and Gas Resource Potential: This area in southern Van Buren County, Arkansas is classified as having moderate potential for oil and gas reserves.

Oil and Gas Development Potential: This area can be classified as wildcat with moderate potential for gas and a low probability for drilling. Well depths will probably be less than 5000 feet. The primary objectives would most likely be the Mississippian, Silurian-Devonian, and Cambro-Ordovician carbonate sections. Spacing is typically 640 acres for a shallow gas well.

Louisiana

Rocky Bayou Tract, DeSoto Parish
Section 12 T. 11 N., R. 12 W., Louisiana Meridian

The subject tract is described as Lot 2 of Section 12, Township 11 North, Range 12 West, Louisiana Meridian, DeSoto Parish. This tract is a Public Domain parcel subject to the PA/EA process to determine the appropriate management of the land.

This tract is on the edge of the Naborton Section of the Red River-Bull Bayou Field which is productive from the wells drilled to Nacatoch and Paluxy formations. The Red River-Bull Bayou Field was at one time one of the most productive in the United States.

This tract is considered to have high potential for development. While the potential exists, it is for deeper formations than have been explored for so far. No interest has been shown in developing any of the deeper potential. It is reasonable to expect this to be the situation for the foreseeable future.

Black Lake Tract, Natchitoches Parish
Section 32, T. 12 N., R. 7 W., Louisiana Meridian

The subject tract is described as lots 5, 6, 8, 11, and 12 of Section 32, Township 12 North, Range 7 West, Louisiana Meridian, Natchitoches Parish. This tract is a Public Domain parcel subject to the PA/EA process to determine the appropriate management of the land.

This tract is considered to be wildcat acreage. No wells in this township have been found to be commercially productive.

This tract is considered to have high potential for development. While the potential exists, it is for deeper formations than have been explored for so far. No interest has been shown in developing any of the deeper potential. It is reasonable to expect this to be the situation for the foreseeable future.

Big Saline Bayou Tract, Rapides Parish
Section 26, T. 5 N., R. 3 E., Louisiana Meridian

The subject tract is described as the NW ¼ of Section 26, Township 5 North, Range 3 East, Louisiana Meridian, Rapides Parish. This tract is a Public Domain parcel subject to the PA/EA process to determine the appropriate management of the land.

This tract (BLM 052007) is within the North Big Island Field and is productive from wells drilled on the tract to Wilcox formation sands. Six wells have been drilled on this tract of which 3 are producing as of this date (July 28, 1999).

Since this tract is productive it is considered to have high potential for additional development. While the potential exists, the current holder of rights has shown no inclination to develop any of the deeper potential. It is reasonable to expect this to be the situation for the foreseeable future.

Duck Lake Tract, St. Martin Parish
Section 26, T. 14 S., R. 11 E., Louisiana Meridian

The subject tract is described as lots 8, 9, and 10 of Section 26, Township 14 South, Range 11 East, Louisiana Meridian, St. Martin Parish. This tract is a Public Domain parcel subject to the PA/EA process to determine the appropriate management of the land.

Part of this tract (ES-2821) is within the Duck Lake Field and is productive from wells drilled as part of the Duck Lake Unit Agreement.

Since this tract is productive it is considered to have high potential for additional development. While the potential exists, the current holder of rights has shown no inclination to develop any of the deeper potential. It is reasonable to expect this to be the situation for the foreseeable future.

Solid non-energy minerals

BLM Manual 3031(6/19/85), Energy and Mineral Resources Assessment, provides a system for estimating the solid non-energy mineral potential. As used in this classification, potential refers to potential for the presence (occurrence) of a concentration of one or more energy and/or mineral resources. It does not refer to or imply potential for development and /or extraction of the mineral resource(s). It does not imply that the potential concentration is or may be economic, that is, could be extracted profitably.

Mineral Potential Classification System

I. Level of Potential

O. The geologic environment, the inferred geologic processes, and the lack of mineral occurrences do not indicate potential for accumulation of mineral resources.

L. The geologic environment and the inferred geologic processes indicate low potential for accumulation of mineral resources.

M. The geologic environment, the inferred geologic processes, and the reported mineral occurrences or valid geochemical/geophysical anomaly indicate moderate potential for accumulation of mineral resources.

H. The geologic environment, the inferred geologic processes, the reported mineral occurrences and/or valid geochemical/geophysical anomaly, and the known mines or deposits indicate high potential for accumulation of mineral resources. The "known mines and deposits " do not have to be within the area that is being classified, but have to be within the same type of geologic environment.

ND. Mineral(s) potential not determined due to lack of useful data. This notation does not require a level-of-uncertainty qualifier.

II. Level of Certainty

A. The available data are insufficient and/or cannot be considered as direct or indirect evidence to support or refute the possible existence of mineral resources within the respective area.

B. The available data provide indirect evidence to support or refute the possible existence of mineral resources.

C. The available data provide direct evidence but are quantitatively minimal to support or refute the possible existence of mineral resources.

D. The available data provide abundant direct and indirect evidence to support or refute the possible existence of mineral resources.

Arkansas

Solid Minerals Summary
Public Domain Arkansas Tracts

(+ indicates moderate level of mineral potential with a C level of certainty)

Tract	County	Formation**	Surface Lithology**	Mineral Potential+
Long Mt. Creek 19-21N14W *(80 ac.)	Baxter	Cotter Fm. Jefferson City Fm.	dolomite	+ lead/zinc, limestone, dolostone, iron, crushed stone
Drasco 33-12N9W *(5 ac.)	Cleburne	Bloyd Fm. and Hale Fm.	shale and sandstone	+ sandstone, crushed stone
Locust Mt. 24-11N31W *(40 ac.)	Crawford	Atoka Fm.	sandstone and shale	+ sandstone, crushed stone
Foster Branch 31-21N10W *(40 ac.)	Fulton	Cotter Fm and Jefferson City Fm.	dolomite	+ iron, crushed stone
Redland Mt 11-5S26W *(40 ac.)	Pike	Stanley Fm. and Jackfork Fm.	shale and sandstone	+ quartz veins, crushed stone, gems
Campbell Hollow 31-14N17W *(40 ac.)	Searcy	Pitkin Fm. and Hale Fm.	limestone and sandstone	+ phosphate rock, sandstone, crushed stone
Bear Creek 20-13N17W *(160 ac.)	Searcy	Bloyd Fm. and Hale Fm.	limestone, shale and sandstone	+ phosphate rock, sandstone
Middle Fork 27-13N17W *(40 ac.)	Searcy	Bloyd Fm. and Hale Fm.	limestone, shale and sandstone	+ phosphate rock, sandstone, crushed stone
Calf Creek 14-14N18W *(40 ac.)	Searcy	Bloyd Fm. and Hale Fm.	limestone, shale and sandstone	+ phosphate rock, sandstone, crushed stone
Point Peter Mt. 11-14N18W *(40 ac.)	Searcy	Bloyd Fm. and Hale Fm.	limestone, shale and sandstone	+ phosphate rock, sandstone, crushed stone
Buffalo River 3-15N18W *(40ac.)	Searcy	Boone Fm.	limestone, shale	+ phosphate rock, sandstone
West Fork 9-10N16W *(10 ac.)	Van Buren	Atoka Fm. And Bloyd Fm.	sandstone, shale and limestone	+ sandstone

Fm = Formation
*see text for precise legal locations.(acres)
**from : Geologic Map of Arkansas, B.R. Haley, et al, 1993, revised

Louisiana

The four Louisiana tracts are located in the Gulf Coastal Plain Province and contain surface materials of primarily unconsolidated sediments (sands and clays) and lignite of Tertiary Age and younger. There is a moderate level of mineral potential with a C level of certainty for sand and gravel. Presence of other non-energy minerals are not known.

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Appendix C - Recreation and Visual Resources

Recreation Opportunity Spectrum Class Descriptions

Recreation opportunities can be expressed in terms of three main components: activities, settings, and experiences. For management and conceptual convenience, possible mixes of these components have been arranged along a spectrum, or continuum. This Recreation Opportunity Spectrum (ROS) provides a framework for stratifying and defining classes of outdoor recreation opportunity environments. Public lands in Arkansas and Louisiana are relatively small and isolated from other tracts of public lands. Therefore, privately owned lands adjacent to BLM-administered lands were considered when applying the ROS classification system. However, the assigned classification applies only to the public domain lands in Arkansas and Louisiana.

Primitive

Activity: Camping, hiking, enjoying scenery or natural features, photography, hunting (big game, small game, upland birds, waterfowl), swimming, diving (skin and scuba), fishing, canoeing, sailing, and river running (non-motorized craft).

Setting The area is characterized by an essentially unmodified natural environment of fairly large size. Concentration of users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of man-induced restrictions and controls. Only facilities essential for resource protection are used. No facilities for comfort or convenience of the user are provided. Spacing of groups is informal and dispersed to minimize contacts between groups. Motorized use within the area is not permitted.

Experience Opportunity: There are opportunities for isolation from the sights and sounds of man, to feel a part of the natural environment, to have a high degree of challenge and risk, and to use outdoor skills.

Semi-Primitive Non-Motorized

Activity: Camping, hiking, enjoying scenery or natural features, photography, hunting (big game, small game, upland birds, waterfowl), swimming, diving (skin and scuba), fishing, canoeing, sailing, and river running (non-motorized craft).

Setting: The area is characterized by a predominantly unmodified natural environment of moderate to large size. Concentration of users is low, but there is evidence of other area users. On-site controls and restrictions may be present, but are subtle. Facilities are provided only for the protection of resource values and the safety of users. Spacing of groups may be formalized to disperse use and limit contacts between groups. Motorized use is not permitted.

Experience Opportunity: There are some opportunities for isolation from the sights and sounds of man, but this is not as important for this classification as it is for primitive opportunities. Opportunities are available to have a high degree of interaction with the natural environment, to have moderate challenge and risk, and to use outdoor skills.

Rural

Activity: Camping, hiking, enjoying scenery or natural features, photography, swimming, diving (skin and scuba), fishing, canoeing, sailing, and river running (motorized craft), power boating, picnicking, rock collecting, wood gathering, auto touring, water skiing and other water sports, interpretive services use, rustic resorts and organized camps, competitive games, spectator sports, bicycling, jogging, outdoor concerts, and modern resorts.

Setting: The area is characterized by a substantially modified natural environment. Resource modification and utilization practices are obvious. Sights and sounds of man are readily evident, and the concentration of users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for specific activities. Developed sites, roads, and trails are designed for moderate to high use. Facilities for intensive motorized use are available.

Experience Opportunity: Opportunities to experience affiliation with individuals and groups are prevalent as is the convenience of the sites and opportunities. These factors are generally more important than the natural setting. Opportunities for wildland challenges, risk taking, and testing of outdoor skills are unimportant, except in specific activities involving challenge and risk.

Urban

Activity: Camping, hiking, enjoying scenery or natural features, nature study, photography, swimming, diving (skin and scuba), fishing, canoeing, sailing, and river running (non-motorized craft), power boating, picnicking, rock collecting, wood gathering, auto touring, water skiing and other water sports, interpretive services use, rustic resorts and organized camps, competitive games, spectator sports, bicycling, jogging, outdoor concerts, and modern resorts.

Setting: The area is characterized by a substantially modified natural environment. Resource modification and utilization practices are obvious. Sights and sounds of man are readily evident, and the concentration of users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for specific activities. Developed sites, roads, and trails are designed for moderate to high use. Facilities for intensive motorized use are available.

Experience Opportunity: Opportunities to experience affiliation with individuals and groups are prevalent as is the convenience of sites and opportunities. Experiences of the natural environment and the use of outdoor skills are largely unimportant.

Visual Resources Management (VRM)

The visual resource inventory process contained in BLM Handbook H-8410-1 provides BLM managers with guidance for determining visual values. The inventory consists of scenic quality evaluation, sensitivity level analysis, and delineation of distance zones. Based on these three factors BLM-administered lands are placed into one of four visual resource inventory classes. These inventory classes represent the relative value of the visual resource. Classes I and II being the most valued, Class III representing a moderate value, and Class IV being the least value. Management objectives have been assigned to each Class. An area may be inventoried as VRM Class III but the decision may be made to manage it as a VRM Class IV or vise versa. Cultural modifications may detract from the scenery, or complement, or improve the overall scenic quality of an area. Cultural modifications in the landform/water and vegetation values and addition of structures will be considered when examining proposed resource management actions.

The VRM inventory and management classes were designed to address larger tracts of land than those which comprise the public domain lands in Arkansas and Louisiana. Visual Resource Management objectives discussed in the PA/EA will pertain only to the level and type of disturbance to visual resources, that can be expected to occur under the alternatives and only to the specific tract and not to the general setting in which the tract is located.

The following VRM class definitions from BLM Handbook H-8410-1 have been amended for purposes of developing and implementing the Arkansas and Louisiana PA/EA. Amendments incorporate the visual resource values provided by existing cultural features significant to the character of the Arkansas and Louisiana landscape.

VRM Class I Objective

The objective of this class is to preserve the existing natural and cultural character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention away from the existing landscape character.

VRM Class II Objective

The objective of this class is to retain the existing natural and cultural character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural and/or cultural features of the characteristic landscape.

VRM Class III Objective

The objective of this class is to partially retain the existing natural and cultural character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural and/or cultural features of the characteristic landscape.

VRM Class IV Objective

The objective of this class is to provide for management activities which require major modification of the existing character of the natural and cultural landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of the casual observer's attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating of the basic elements.

Appendix D - Soils

Soil Complex/Associations Descriptions

Soil Complexes or Associations represent several soil types, each with it's own specific characteristics that are usually found together and so intricately mixed that they could not be mapped separately. The following descriptions provide general characteristics of the complexes/associations found on the tracts.

Arkansas

Arkana-Moko Complex: Soils in this complex are moderately deep (Arkana soils) to shallow (Moko soils) well drained and are found on upland areas.

The *Arkana* soils are low in natural fertility and moderate in content of organic matter. They are medium acid to mildly alkaline in the surface layer and strongly acid to moderately alkaline in the subsoil. The permeability is very slow and the available water capacity is low.

The *Moko* soils are moderate in natural fertility and in content of organic matter. They are neutral or mildly alkaline throughout. The permeability is moderate and the available water capacity is very low. The erosion hazard is considered severe for both soils.

Doniphan, Very Cherty Silt Loam: This is a deep well drained soil found on gently to moderate sloping upland areas. This soil is low in natural fertility and in content of organic matter. It is slightly acid to strongly acid in the surface layer and strongly acid to very strongly acid in the subsoil. The permeability is moderate and the available water capacity is medium. The erosion hazard is considered severe.

Enders-Nella-Steprock Complex: This complex consists of well drained, deep and moderately deep, moderately sloping to moderately steep loamy and stony soils.

The *Enders* soil is low in natural fertility and moderate in content of organic matter. It is strongly acid to extremely acid throughout the profile. The permeability is moderate in the surface layer and very slow in the subsoil, and the available water capacity is moderate. The erosion hazard is moderate.

The *Nella* soil is deep and found at the toe of slopes and concave parts of benches. It is low in natural fertility and low in organic matter content. It is strongly acid or very strongly acid throughout. The permeability is moderate and the available water capacity is moderate. The erosion hazard is moderate.

The *Steprock* soil is moderately deep and typically is on the upper part of side slopes and tops of ridges, hills or mountains. Typically, there are stones, cobbles, and gravel on surface in all areas. It is low natural fertility and low in content of organic matter. It is strongly acid or very strongly acid throughout the profile. The permeability is moderate and the available water capacity is very low. The erosion hazard is considered to be very severe.

Gassville-Doniphan Complex: This is a moderately deep to deep, well drained, moderately sloping to moderately steep complex found on upland ridges and hillsides.

The *Gassville* soil is low in natural fertility and moderate in content of organic matter. It is slightly acid to strongly acid in the surface layer and strongly acid to very strongly acid in the subsoil. The permeability is very slow and the available water capacity is low. The erosion hazard is considered severe.

A description of the Doniphan soil may be found under Doniphan, Very Cherty Silt Loam.

Nella-Enders Association (Steep): This association consists of deep well drained soils on steep hill sides and mountain sides. For the soil characteristics see the description of *Enders* soils and *Nella* soils under the Enders-Nella-Steprock complex.

Nella-Steprock-Mountainburg Complex: Soils in this complex are deep (Nella soils) to shallow (Mountainburg soils), well drained and very stony soils found mainly on side slopes. For the soil characteristics of the Nella soil see the description under the Enders-Nella-Steprock complex.

The *Mountainburg* soil is shallow and well drained and found on hill sides. The Mountainburg soil is low in natural fertility and low in organic content. It is moderately acid or strongly acid in the surface layer and strongly acid or very strongly acid in the subsoil throughout. The permeability is moderately rapid and the available water capacity is very low. The erosion hazard is considered to be very severe.

Nella-Steprock Complex: Soils in this complex are deep and moderately deep, well drained stony and very stony and may occur on gentle slopes to moderately steep mountainsides. For the soil characteristics see the description under Enders-Nella-Steprock complex.

Enders-Nella Stony Loams: The general description and soil characteristics would be the same as discussed in the Enders-Nella-Steprock complex.

Linker-Mountainburg Complex: These soils are well drained, moderately deep (Linker soil) and shallow (Mountainburg soil). These are gravelly and stony soils found on broad mountain tops and strongly sloping and moderately steep mountain or hill sides. A description of the Mountainburg soil characteristics may be found under the Nella-Steprock-Mountainburg complex.

The permeability of the *Linker* soil is moderate and the available water capacity is low. The erosion hazard is considered to be very severe. The Linker soil is low in natural fertility and in content of organic matter. It is strongly acid to extremely acid throughout the profile. The permeability is moderate and the available water capacity is low. The erosion hazard is considered severe.

Bengal-Bismarck-Yanush Complex: This complex is found on the lower portions of dissected slopes of hills adjacent to mountains and is moderately deep (Bengal soil) to very deep (Yanush soil). The Bismarck soil is shallow.

The *Bengal* soil is medium in natural fertility and in content of organic matter. It is strongly acid to very strongly acid throughout the profile. The permeability is slow and the available water capacity is moderate. The erosion hazard is considered severe.

The *Bismarck* soil is low in natural fertility and in content of organic matter. It is strongly acid to very strongly acid throughout the profile. The permeability is slow and the available water capacity is very low. The erosion hazard is considered severe.

The *Yanush* soil is medium in natural fertility and in content of organic matter. It is strongly acid to very strongly acid throughout the profile. The permeability is moderate and the available water capacity is moderate. The erosion hazard is considered moderate.

Bigfork-Yanush Rock Outcrop Complex: These soils are moderately deep and well drained and occur primarily on mountain side slopes.

Louisiana

Sacul Fine Sandy Loam: The *sacul fine sandy loam* is a moderately deep soil found on moderately steep to steep slopes bordering drainage ways in upland areas. This soil is low in natural fertility and moderate in content of organic matter. It has a high level of exchangeable aluminum which is potentially toxic to most crops throughout the profile. The permeability is slow in the surface layer and very slow in the subsoil, and the available water capacity is low. The erosion hazard is severe because of slope.

Moreland Clay: The *moreland clay* soil is found on more level areas and is somewhat poorly drained. It could be subject to rare flooding which could occur during unusually wet periods. It is high in natural fertility and high in content of organic matter. It is moderately acidic in the surface layer to strongly acid in the subsurface layer. The permeability is moderate in the surface layer and very slow in the subsoil, and the available water capacity is moderate to high. The erosion hazard is moderate.

Foley Silt Loam: The *foley silt loam* soil is found at low elevations on level areas and is a poorly drained loamy soil. It has low natural fertility and moderate to high organic content. This soil is moderately acidic in the surface layer to moderately alkaline in the subsurface layer. Permeability is very slow and the available water capacity can be high in the winter but very low in the summer The erosion hazard is slight.

Gore Very Fine Sandy Loam, 1-5% Slopes & Gore Silt Loam 1- 5% Slopes: The *gore* series is found on gently sloping to moderately sloping areas adjacent to drainageways and is moderately well drained. It has low natural fertility and moderate to low organic content. This soil is strongly to moderately acid in the surface layers and moderately acid to alkaline in the subsurface layers. Permeability is slow and the available water capacity is moderate in the winter and poor in the summer. The erosion hazard is slight.

Guyton Silt Loam, Frequently Flooded: The *Guyton silt loam* soil is found on level areas and is poorly drained and is subject to frequent flooding. It is found on the flood plains of stream that drain upland areas. This soil has low natural fertility and moderate organic content. It is soil is strongly acid throughout all layers. Permeability is very slow and the available water capacity is moderate in the winter and poor in the summer. The erosion hazard is slight.

Yorktown Clay, Frequently Flooded: This soil is found on level areas, old channel scars and depressional areas. It is very poorly drained and subject to long periods of ponding and frequent flooding. This soil has medium fertility and moderate to high organic content. It is moderately acid in the surface layer and slightly alkaline in the subsurface layers. Permeability is very slow and the available water capacity is moderate in the winter and poor in the summer. The erosion hazard is slight.

Fausse Soils: The *fausse* soils are found on low ponded backswamp positions on the lower Mississippi River delta system and are flooded most years for 6 to 10 months and are very poorly drained. Permeability is very slow and the available water capacity would be high as this soil stays saturated for 6 - 10 months of the year. The fausse soils are slightly acid and the erosion hazard is slight.

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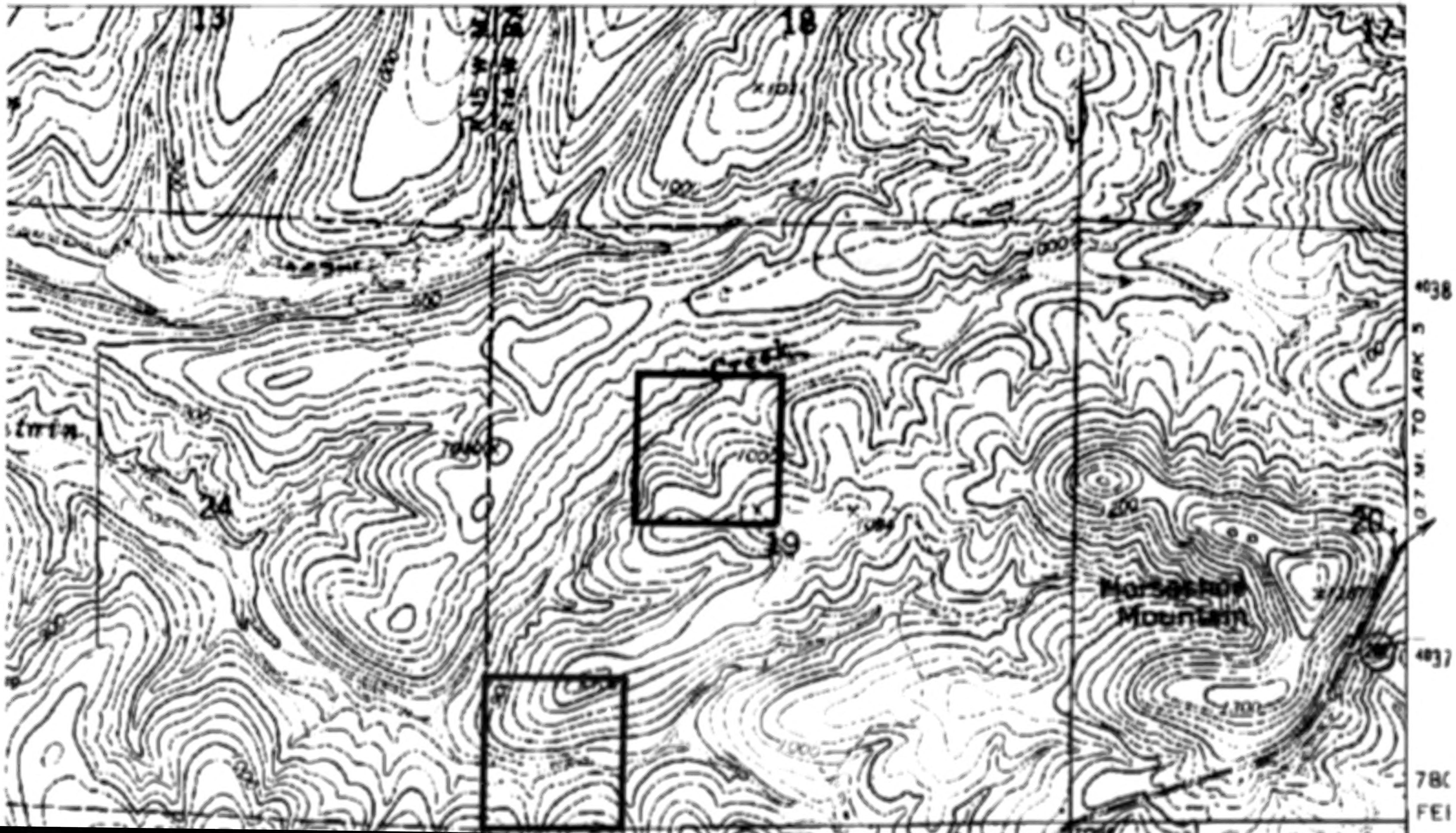
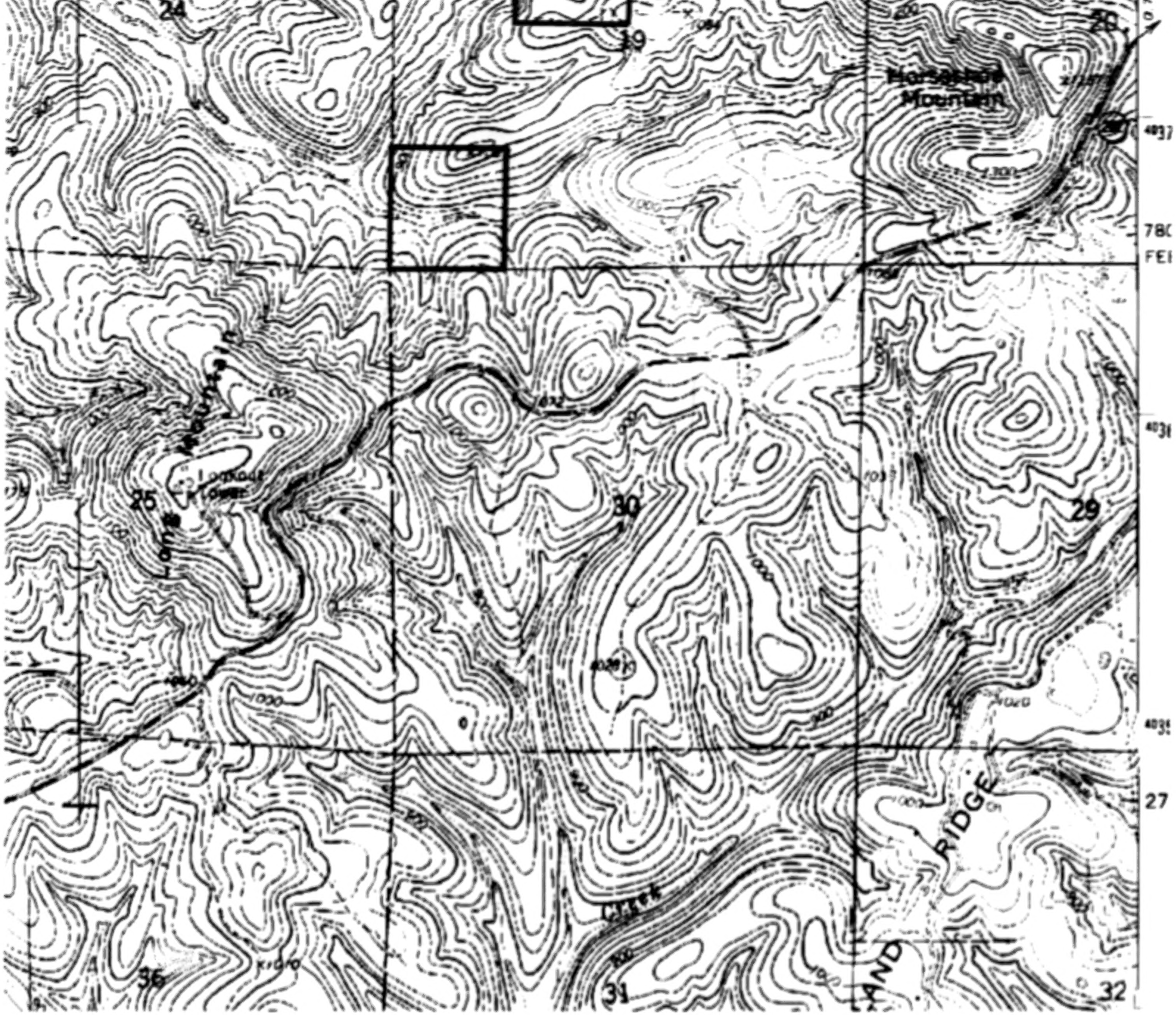
SW1/4SW1/4, 5th Principal Meridian
Baxter County, Arkansas

Long Mountain Creek Tracts





Tract Boundary

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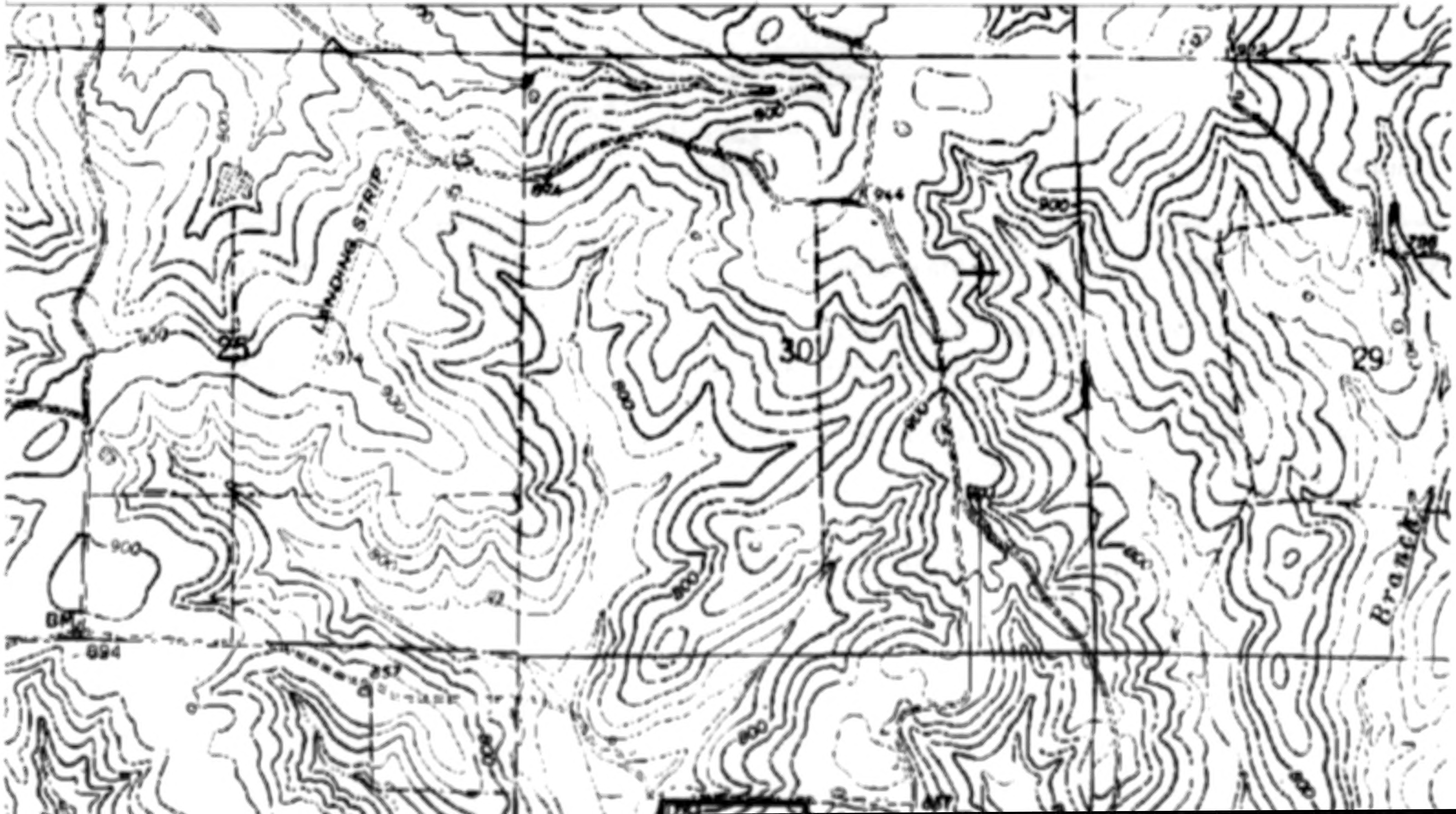
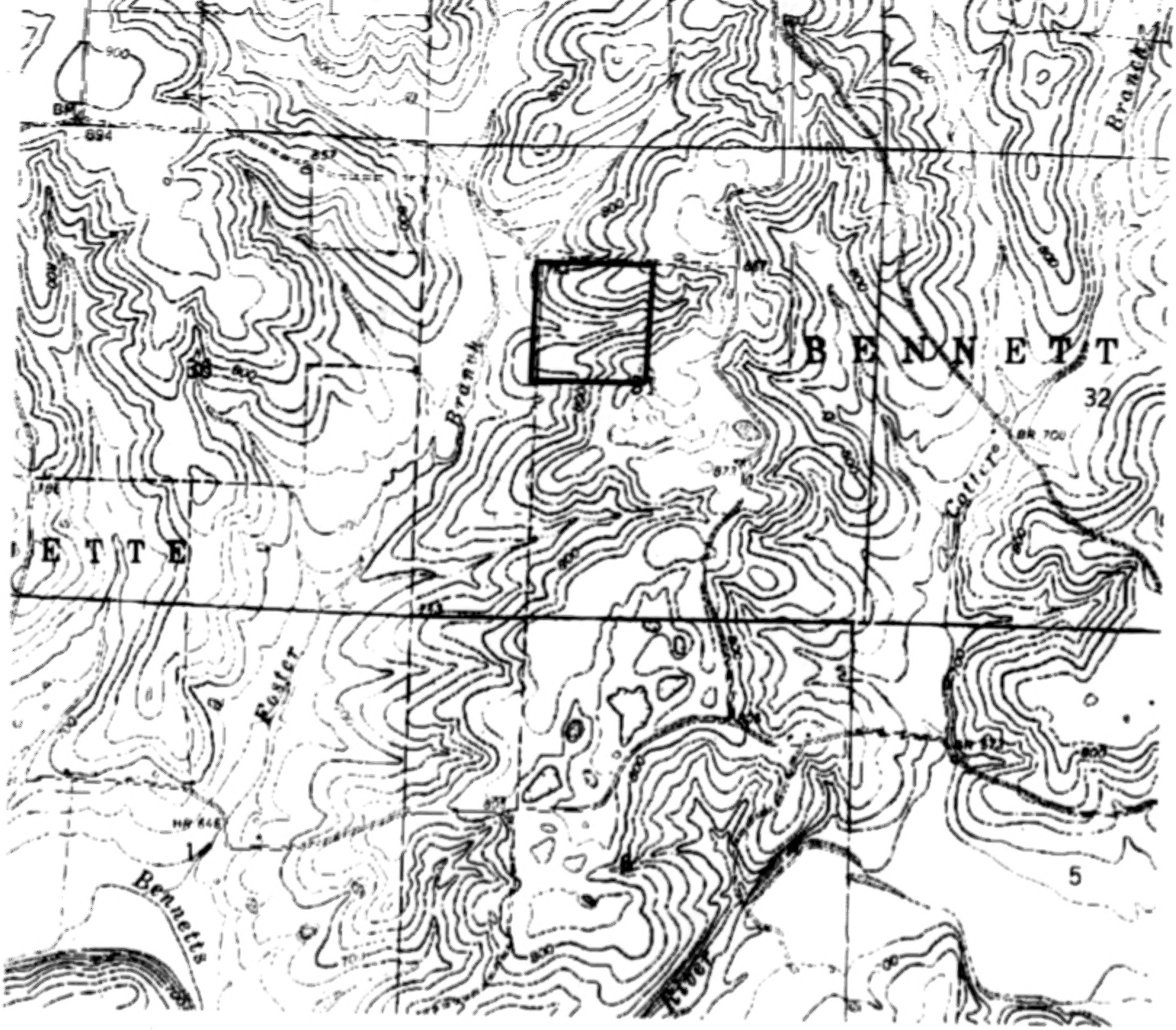
5th Principal Meridian
Fulton County, Arkansas

Foster Branch Tract





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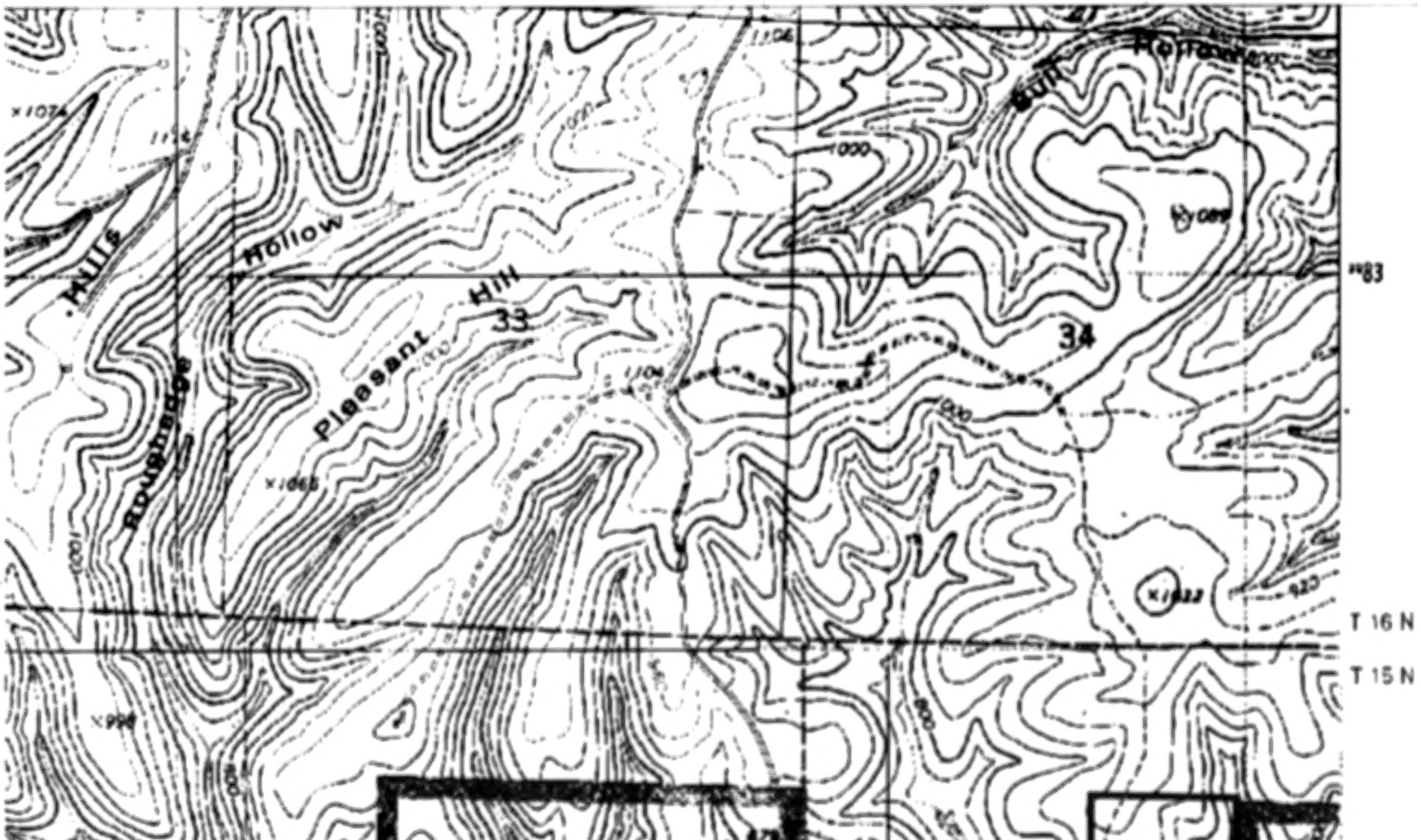
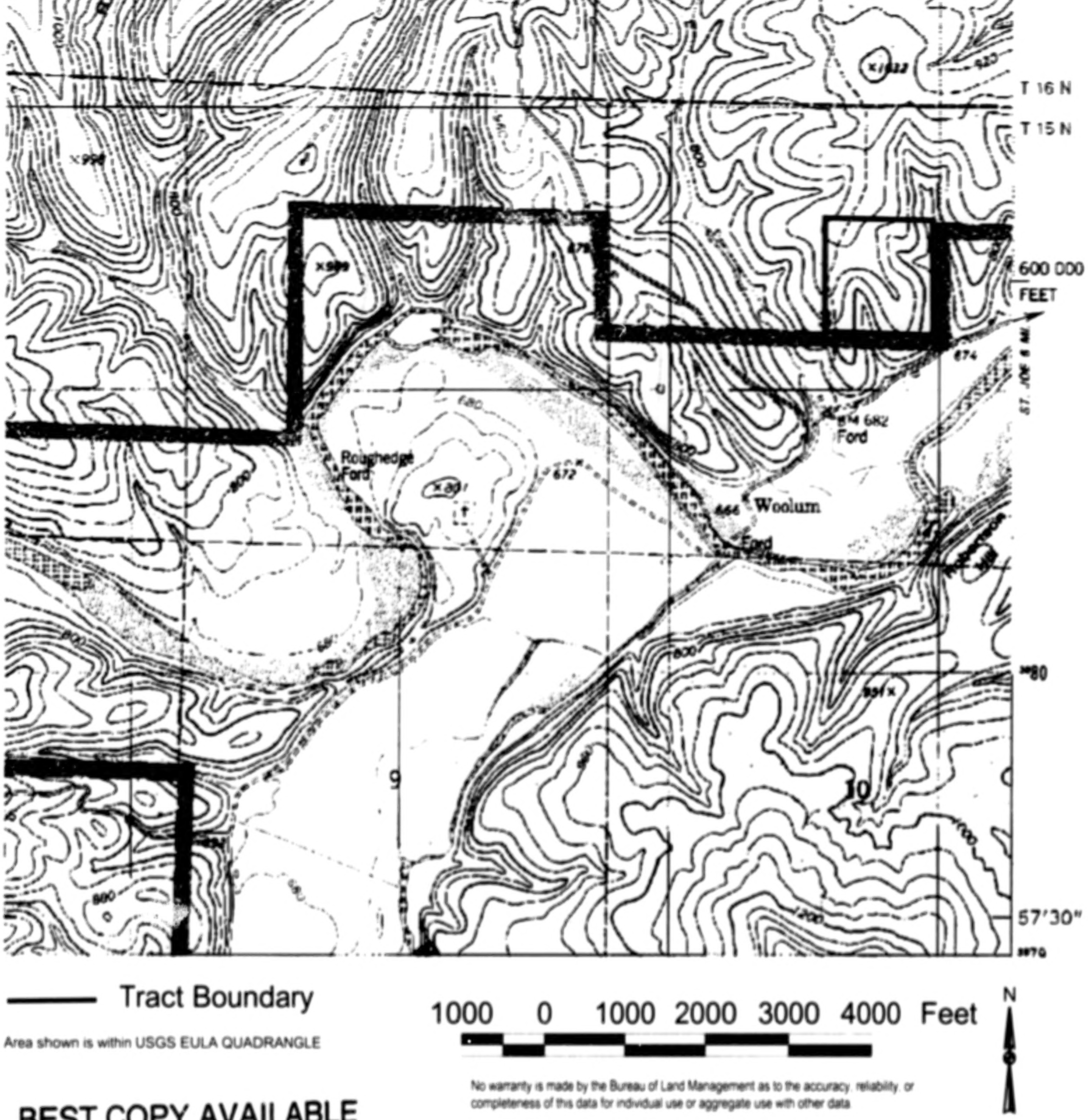
Searcy County, Arkansas

Buffalo River Tract





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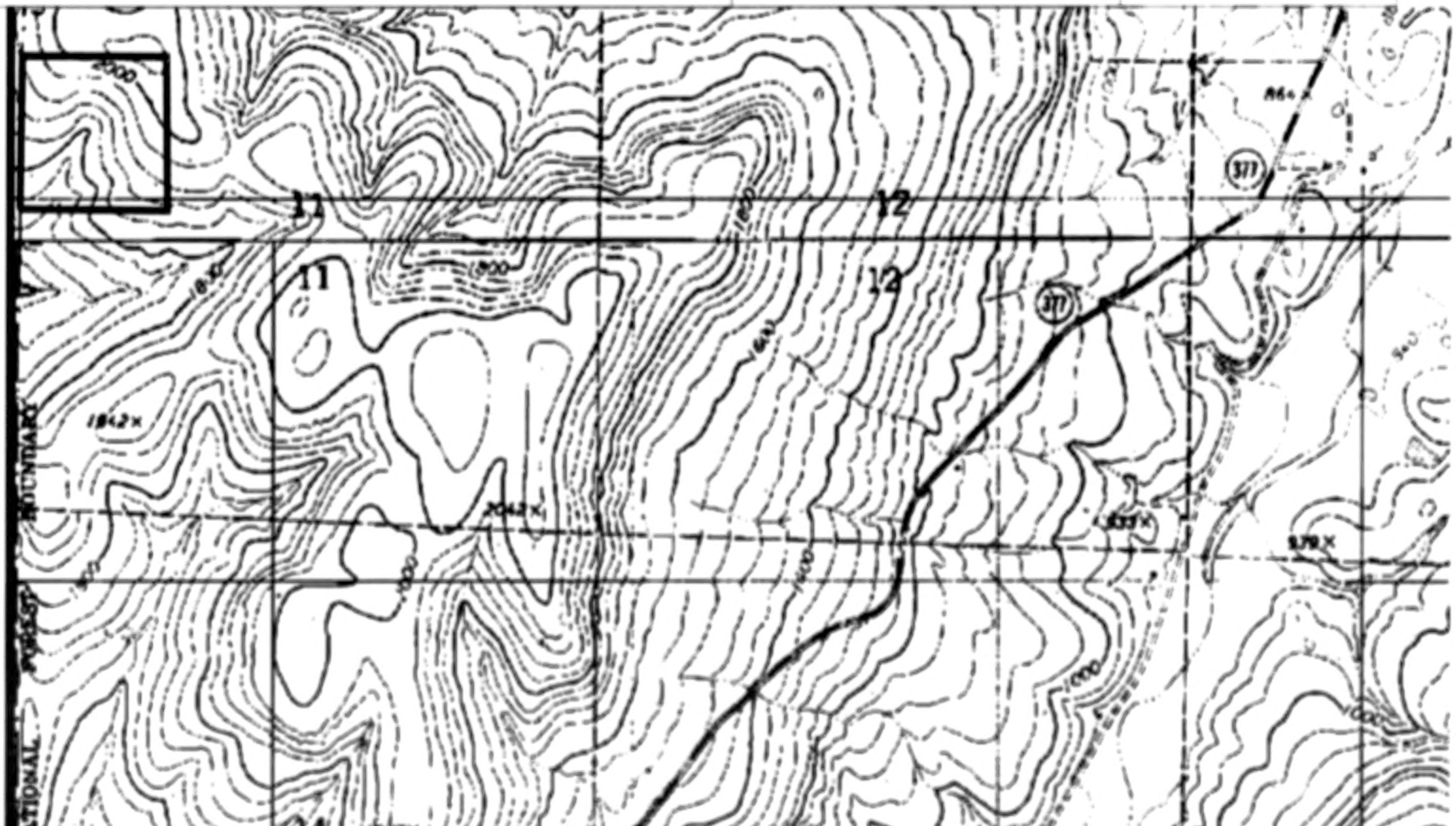
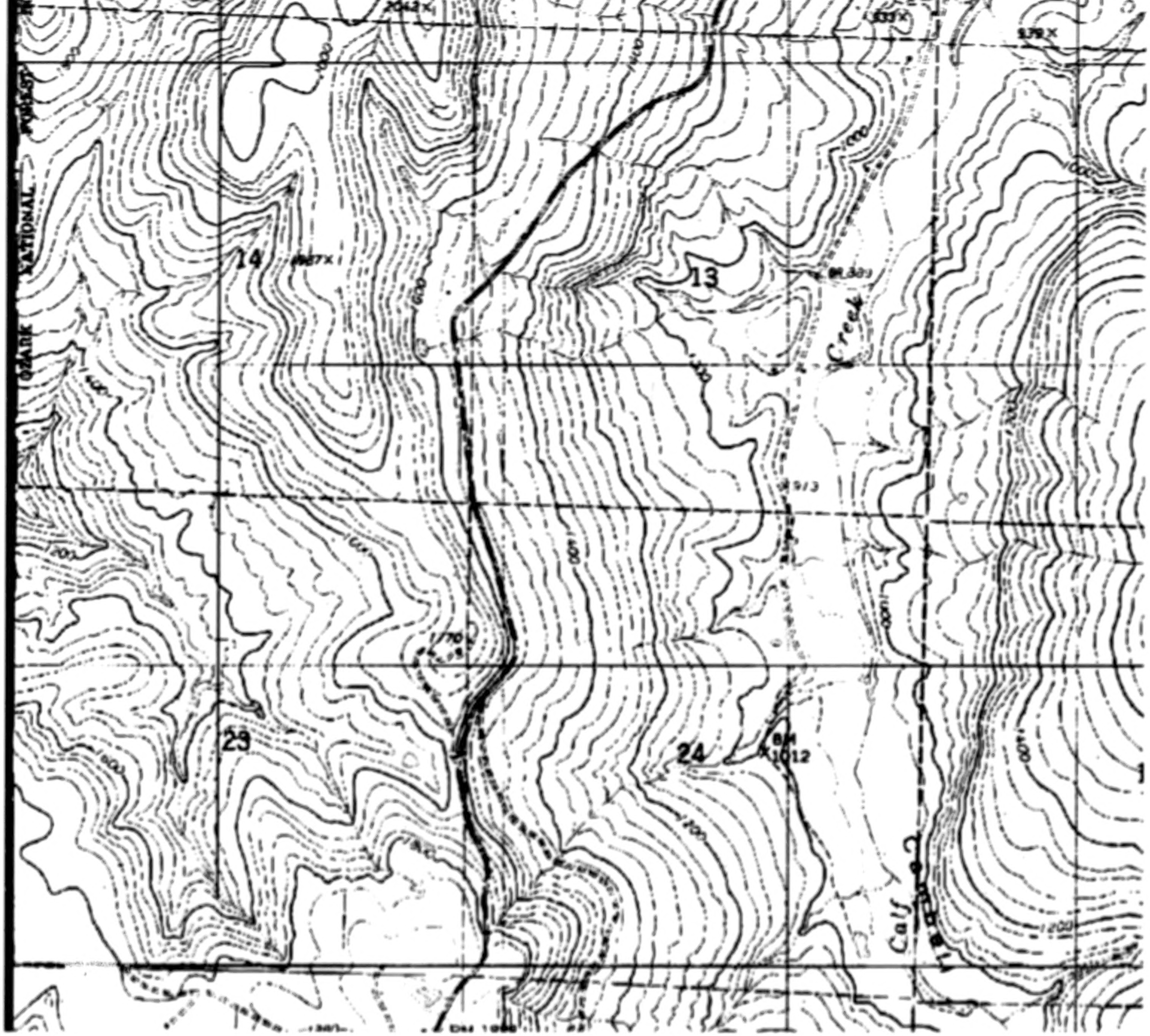
Searcy County, Arkansas

Point Peter Mountain Tract





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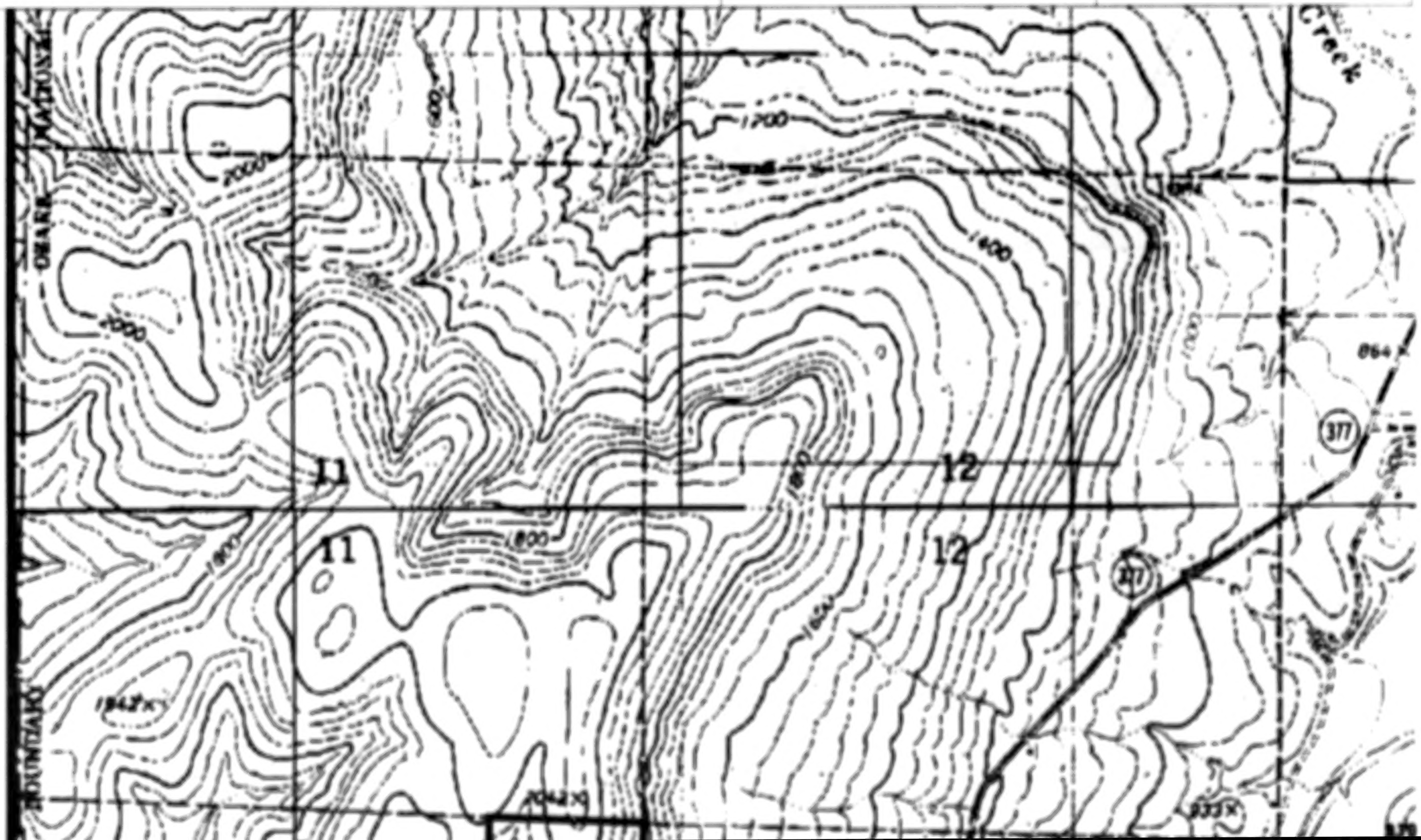
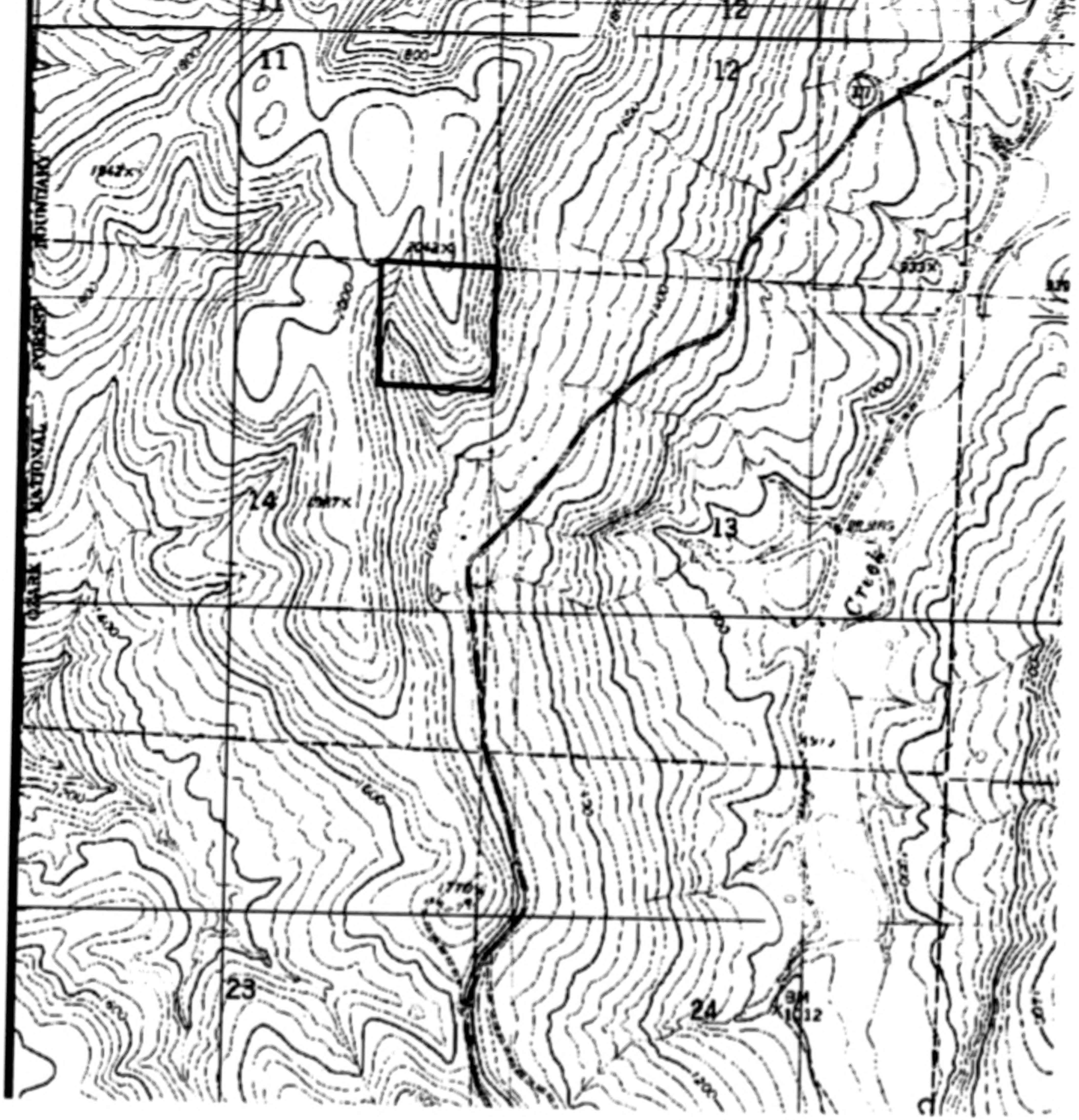
Searcy County, Arkansas

Calf Creek Tract





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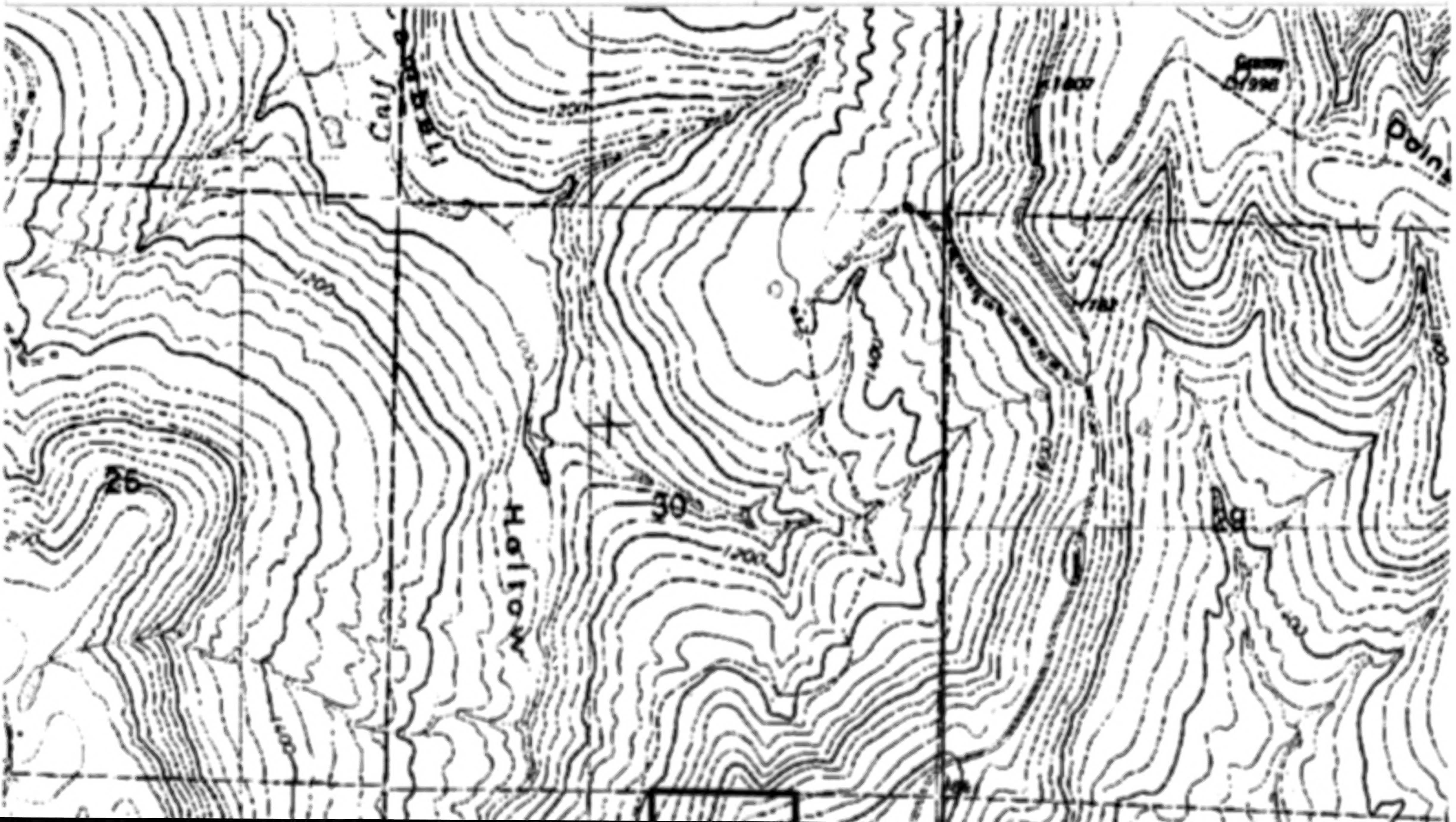
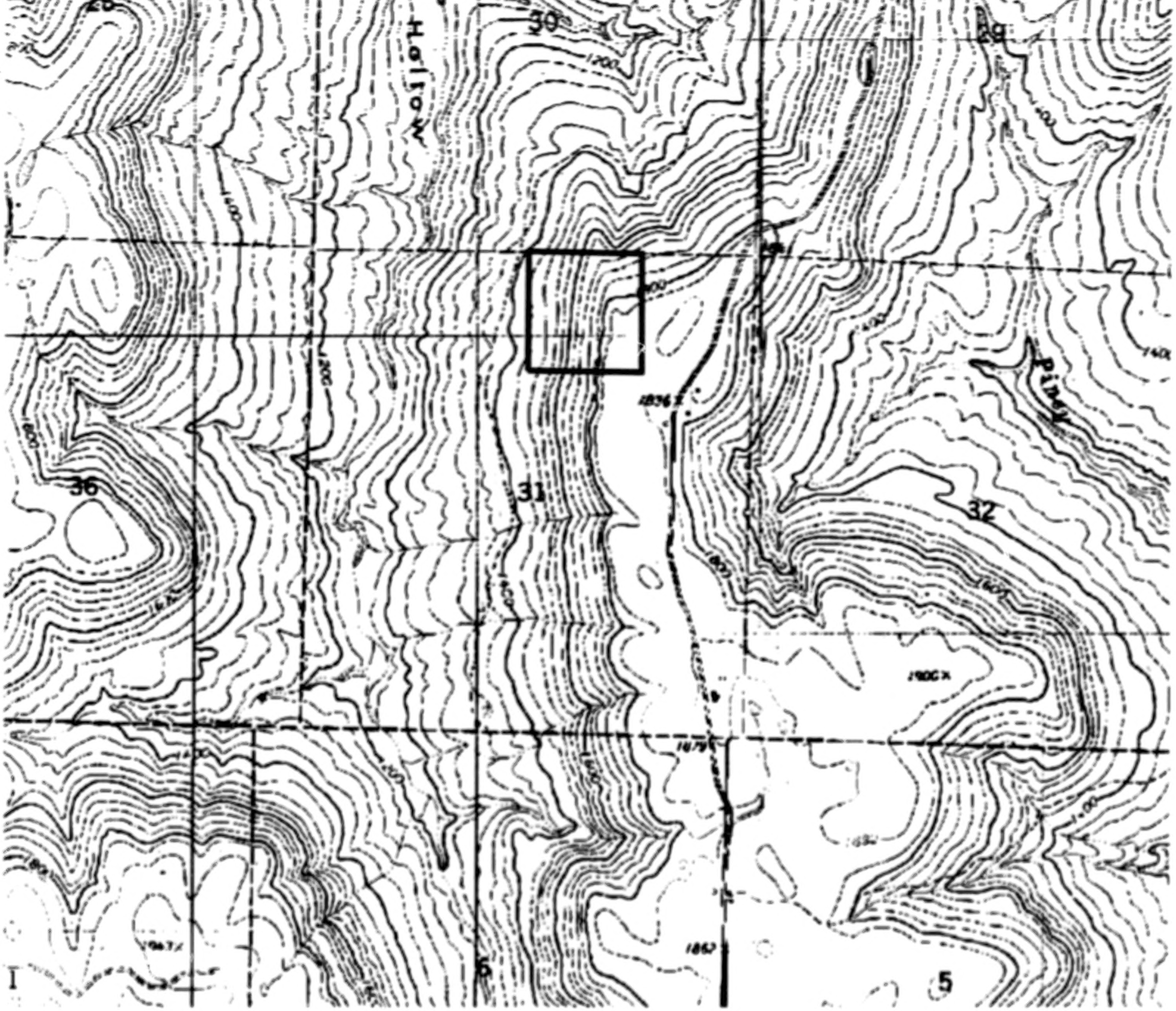
5th Principal Meridian
Searcy County, Arkansas

Campbell Hollow Tract





Tract Boundary

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T.13N., R.17W., Sec.20, W1/2NE1/4,
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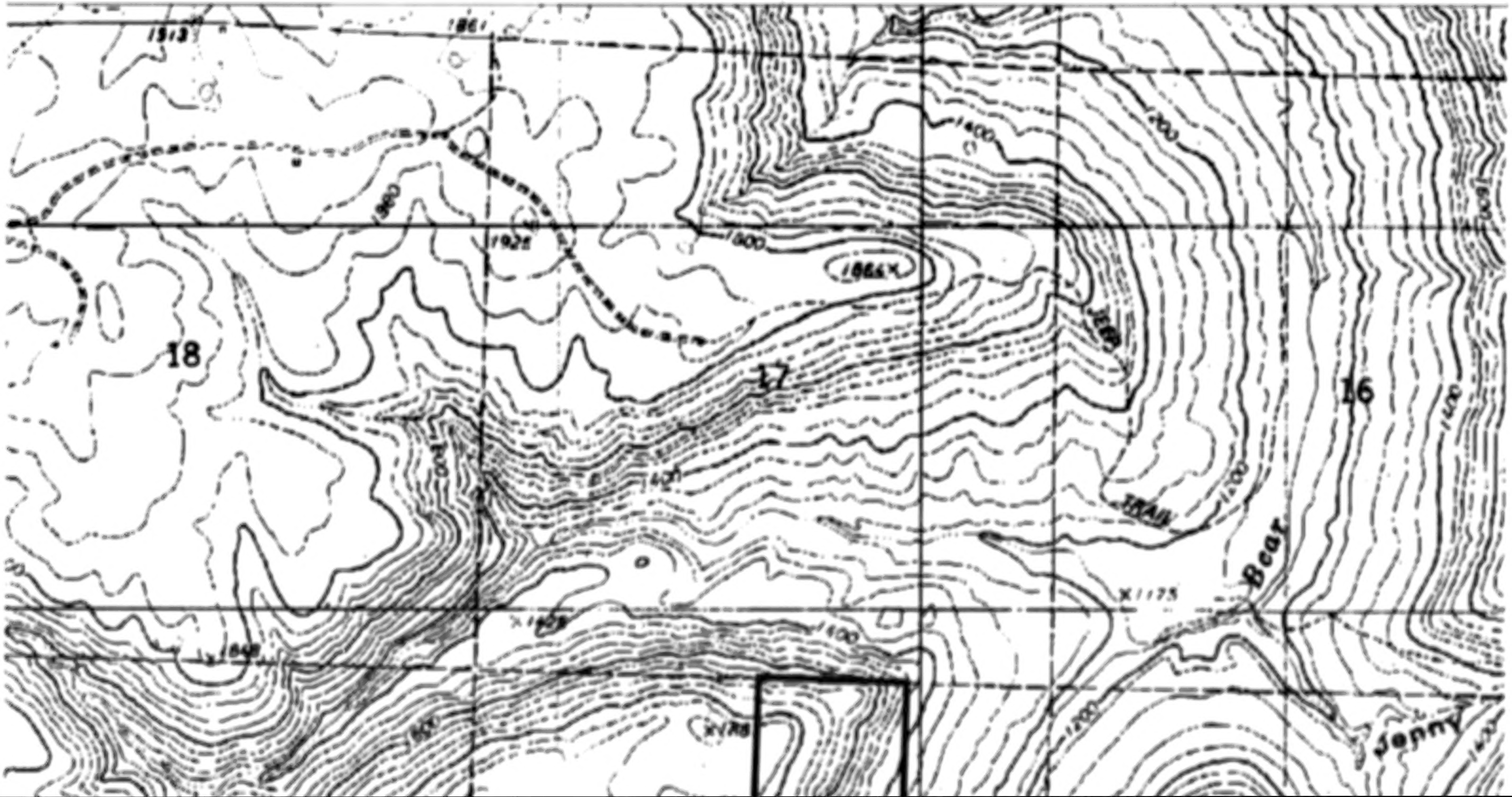
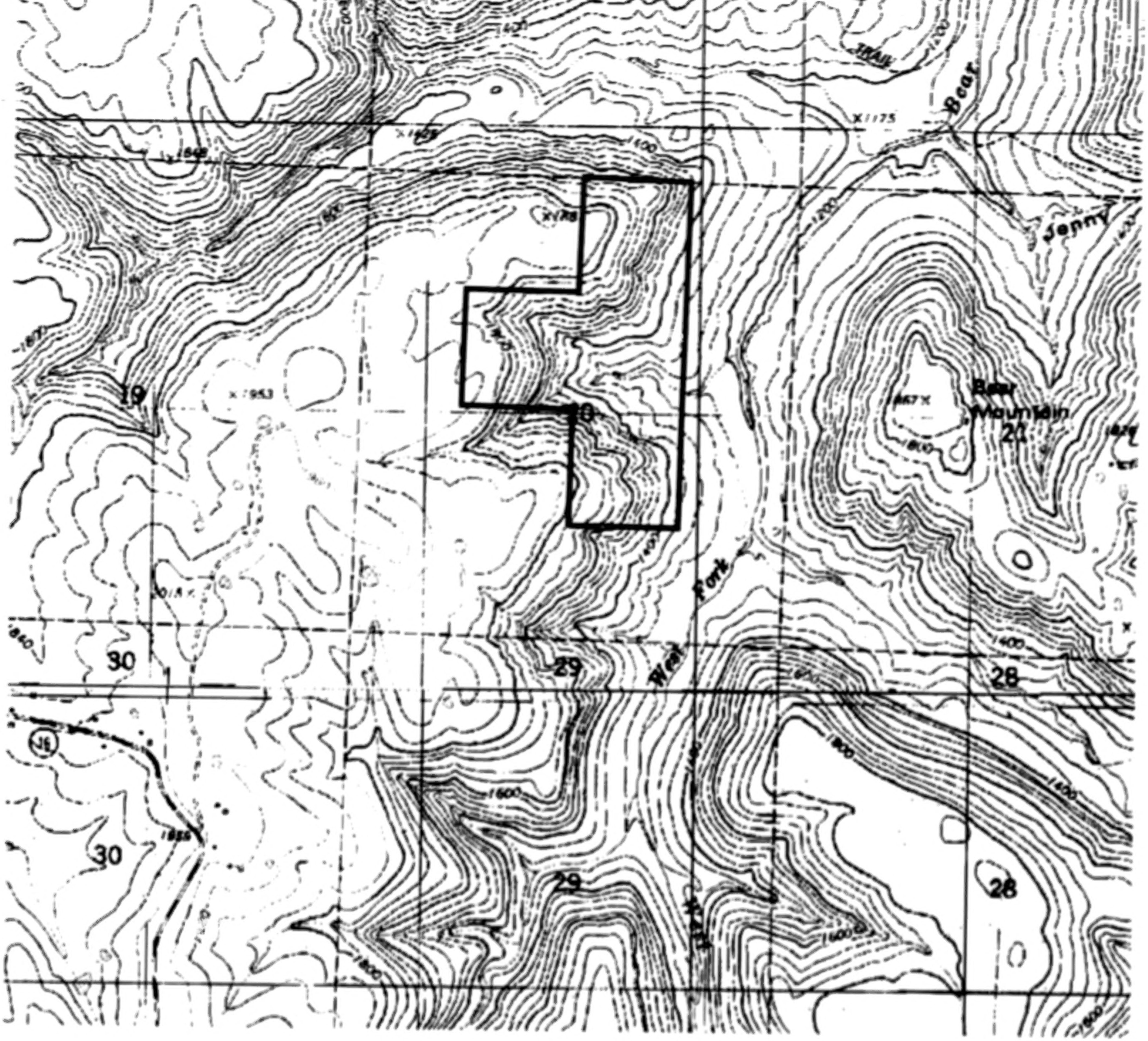
5th Principal Meridian
Searcy County, Arkansas

Bear Creek Tract





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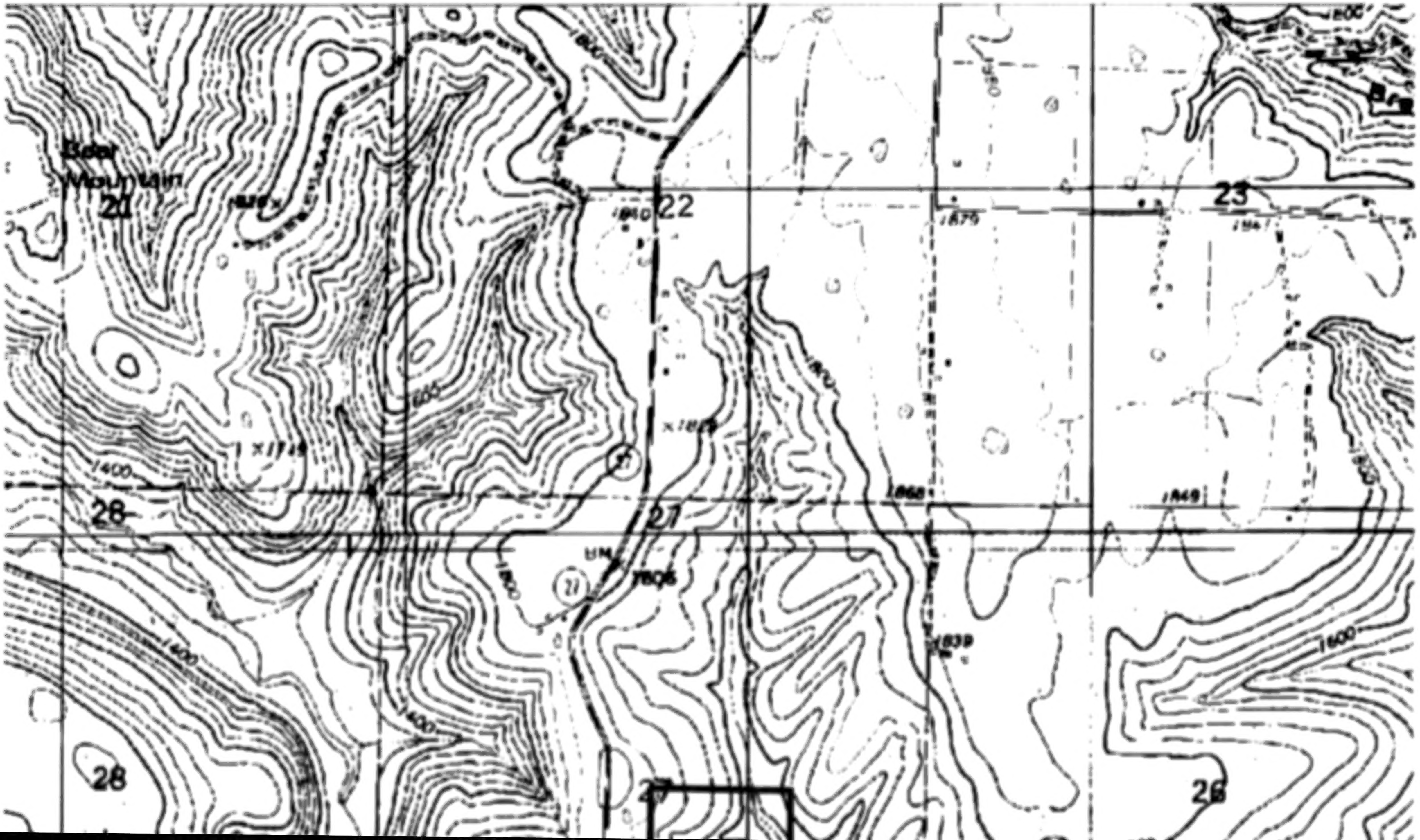
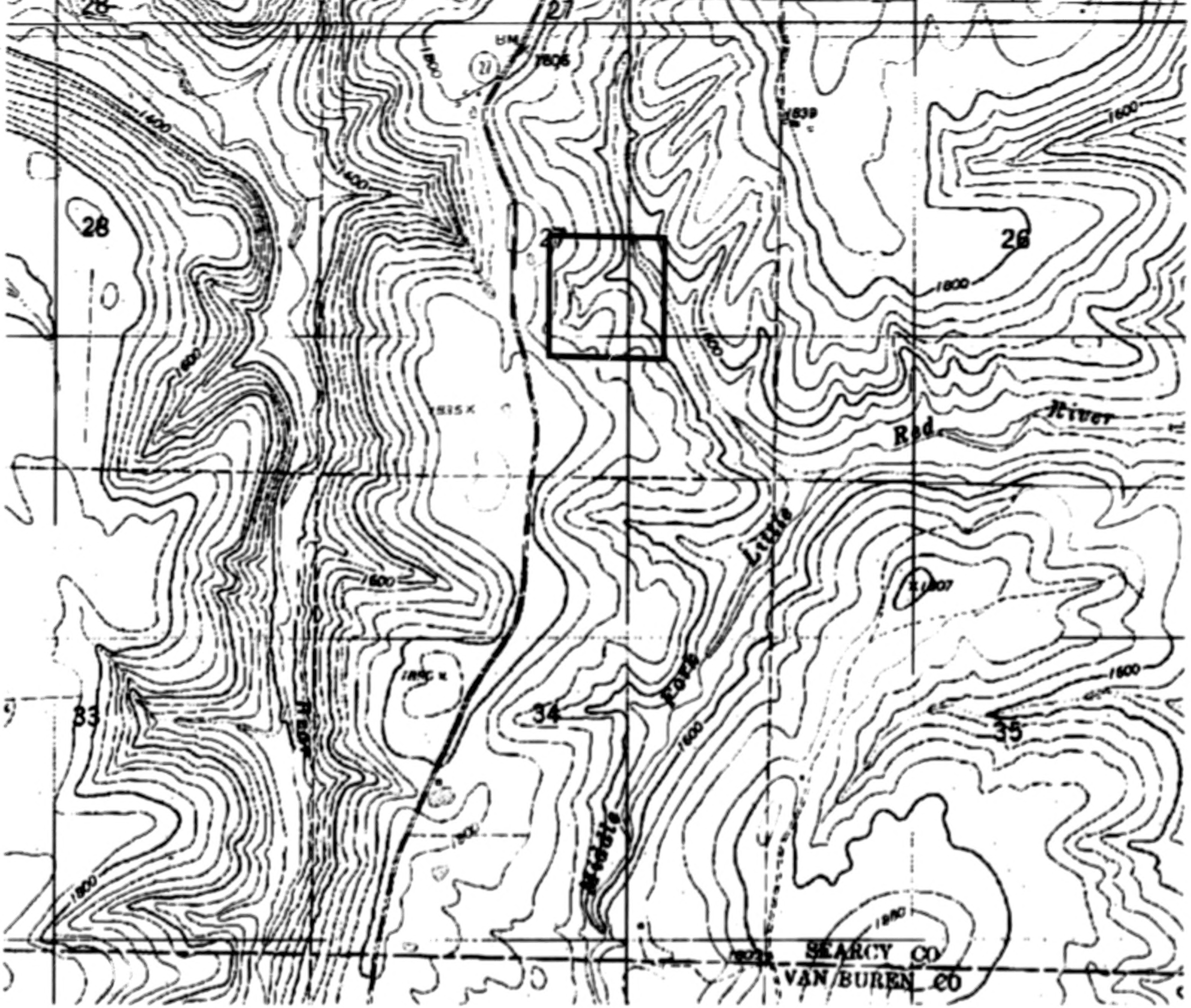
5th Principal Meridian
Searcy County, Arkansas

Middle Fork Tract





Tract Boundary

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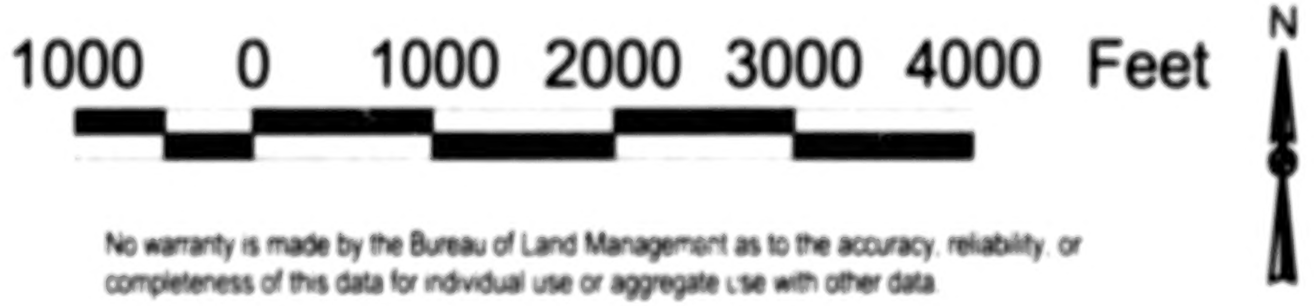

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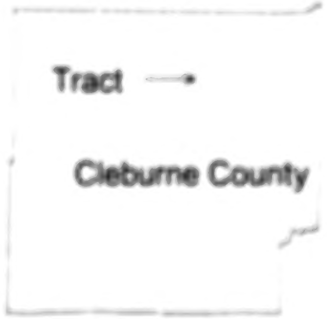
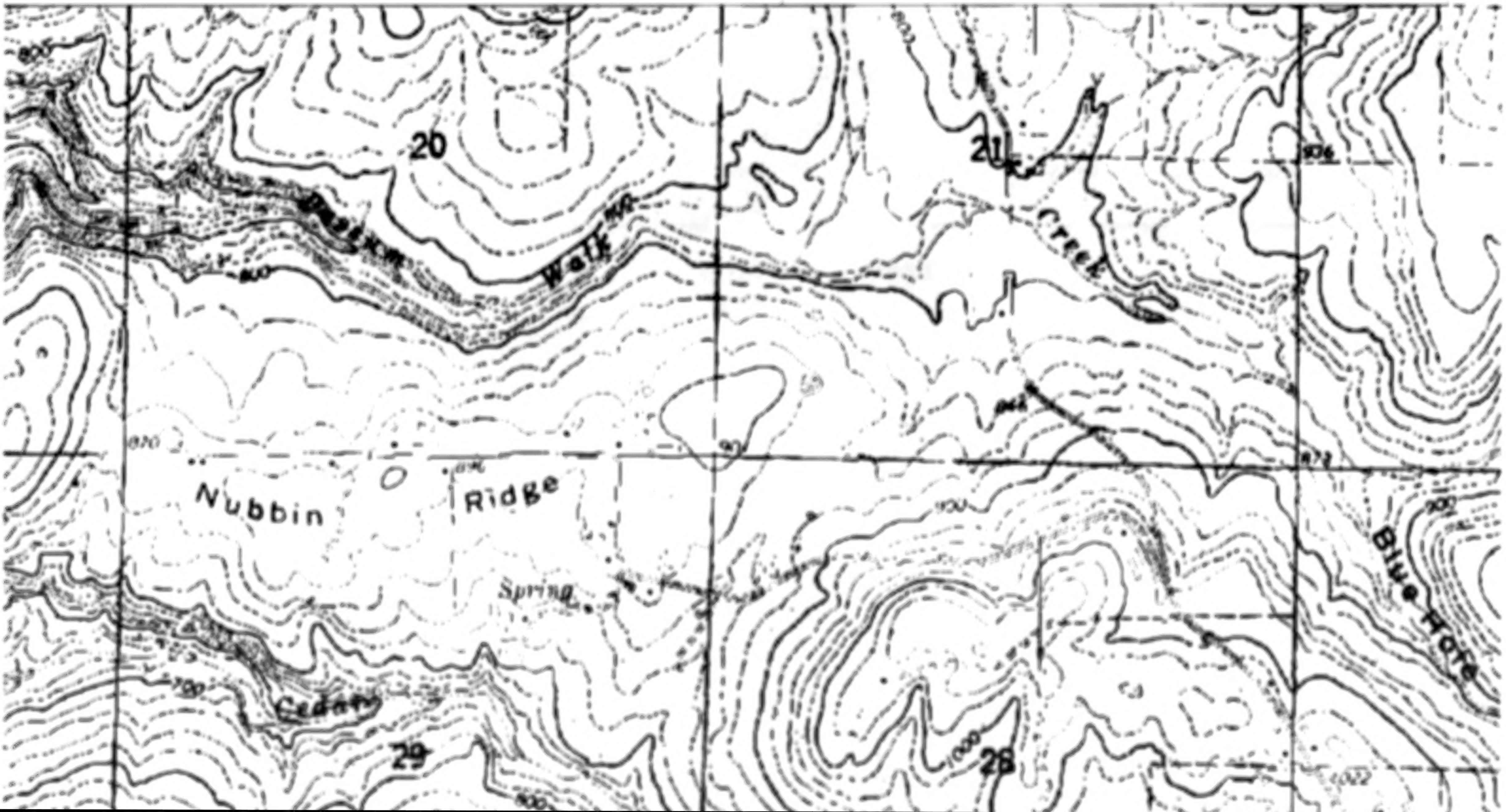
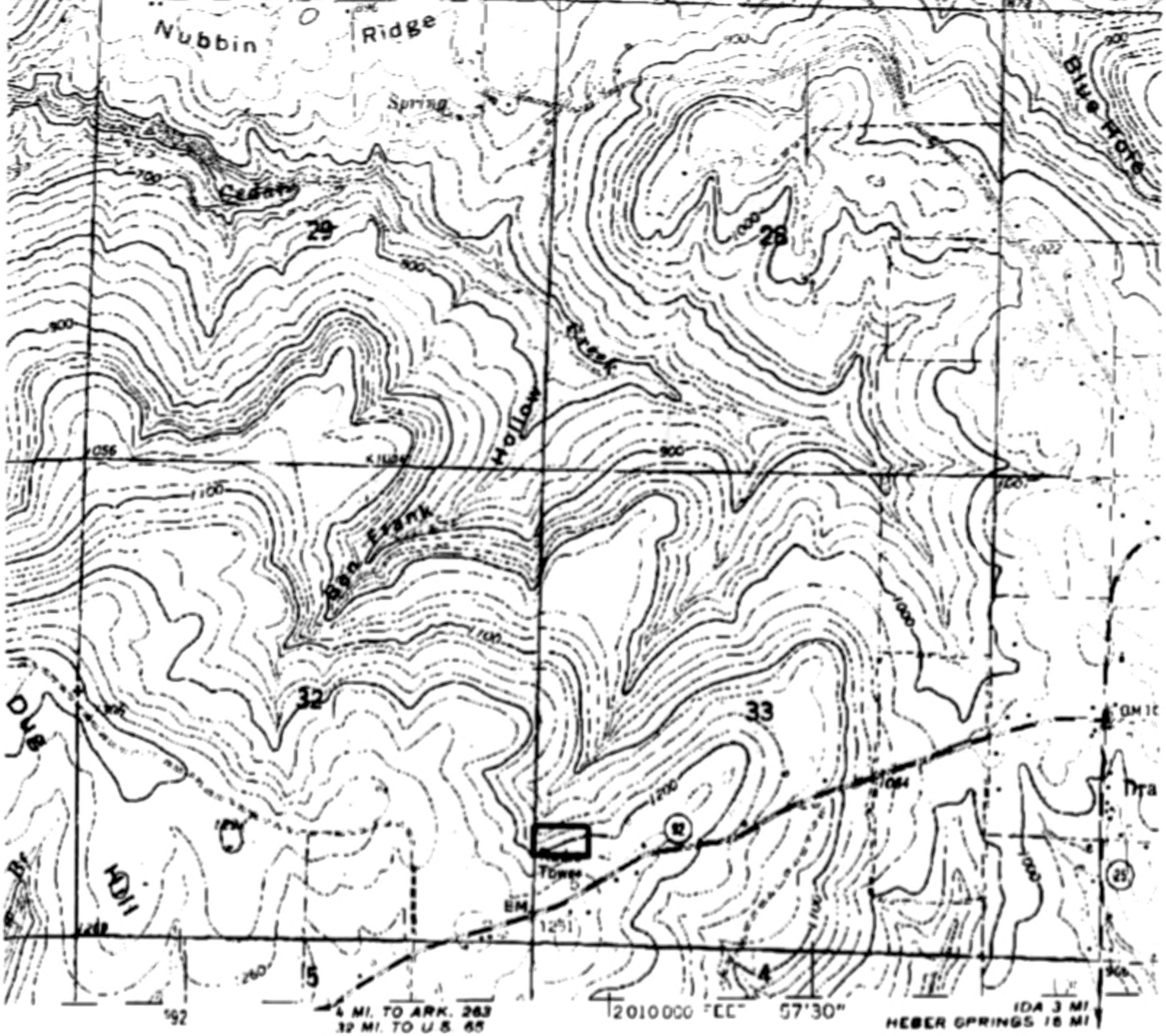
N1/2NW1/4SW1/4SW1/4
5th Principal Meridian
Cleburne County, Arkansas

DrascoTract







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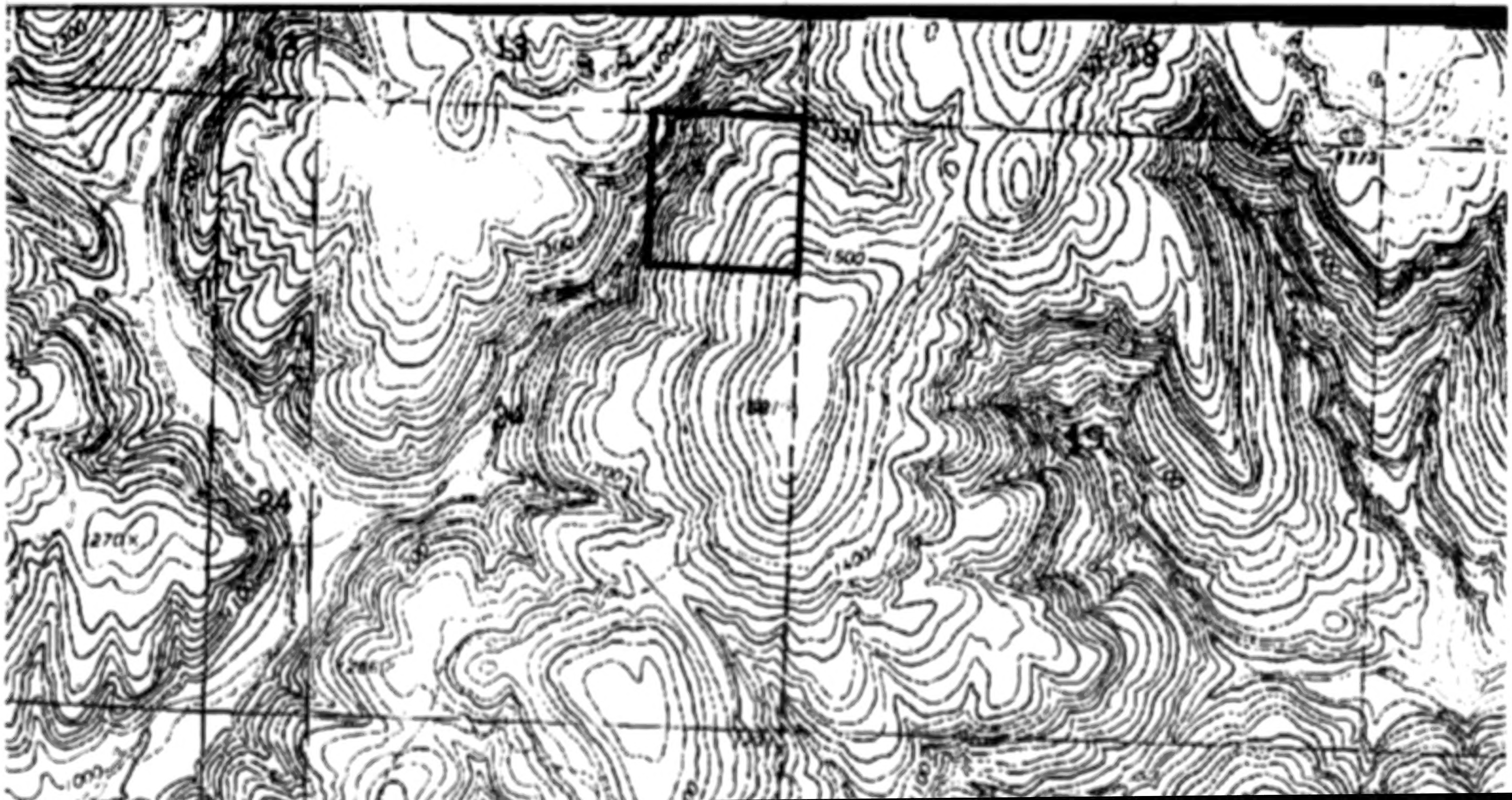
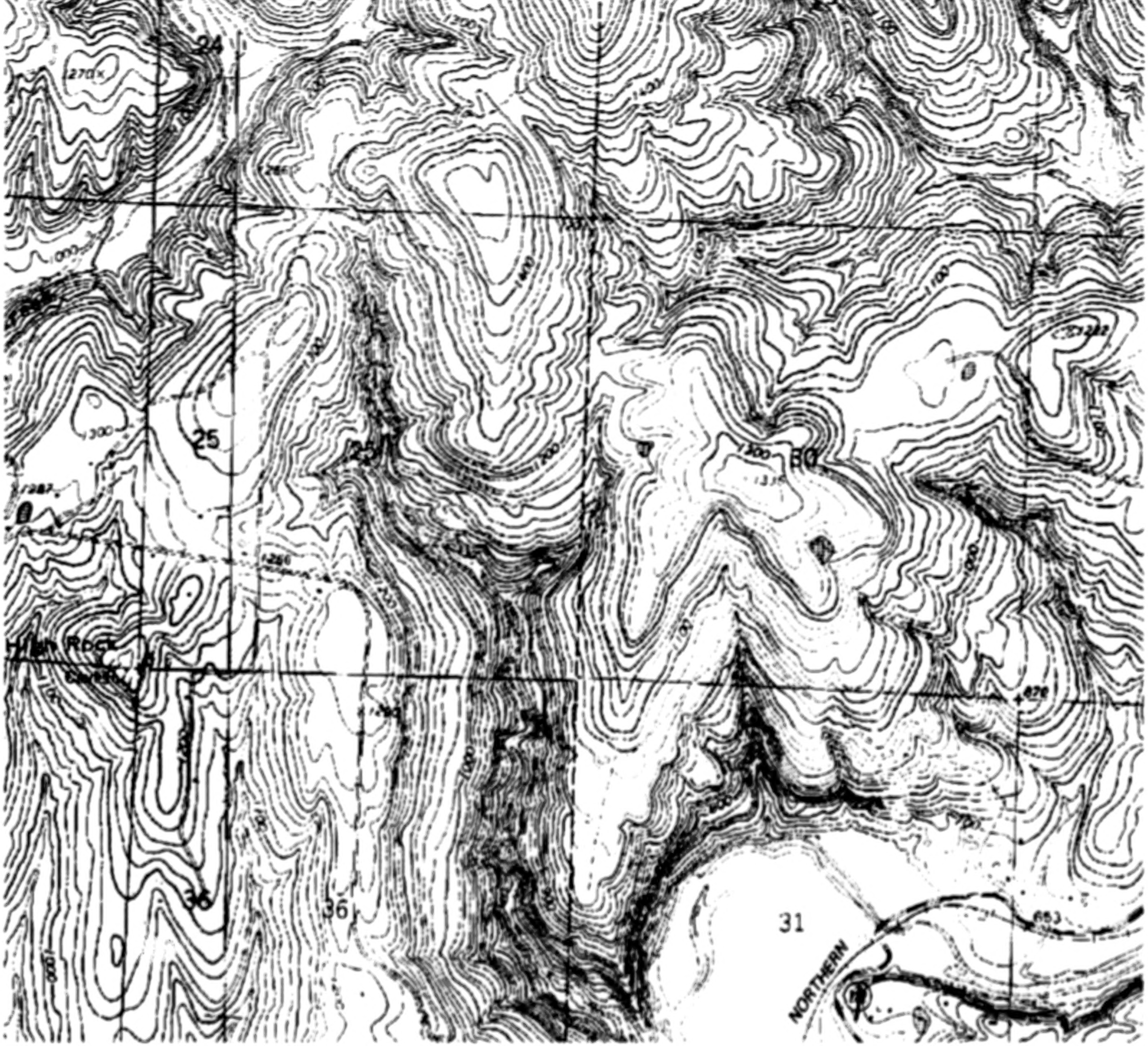
5th Principal Meridian
Crawford County, Arkansas

Locust Mountain Tract





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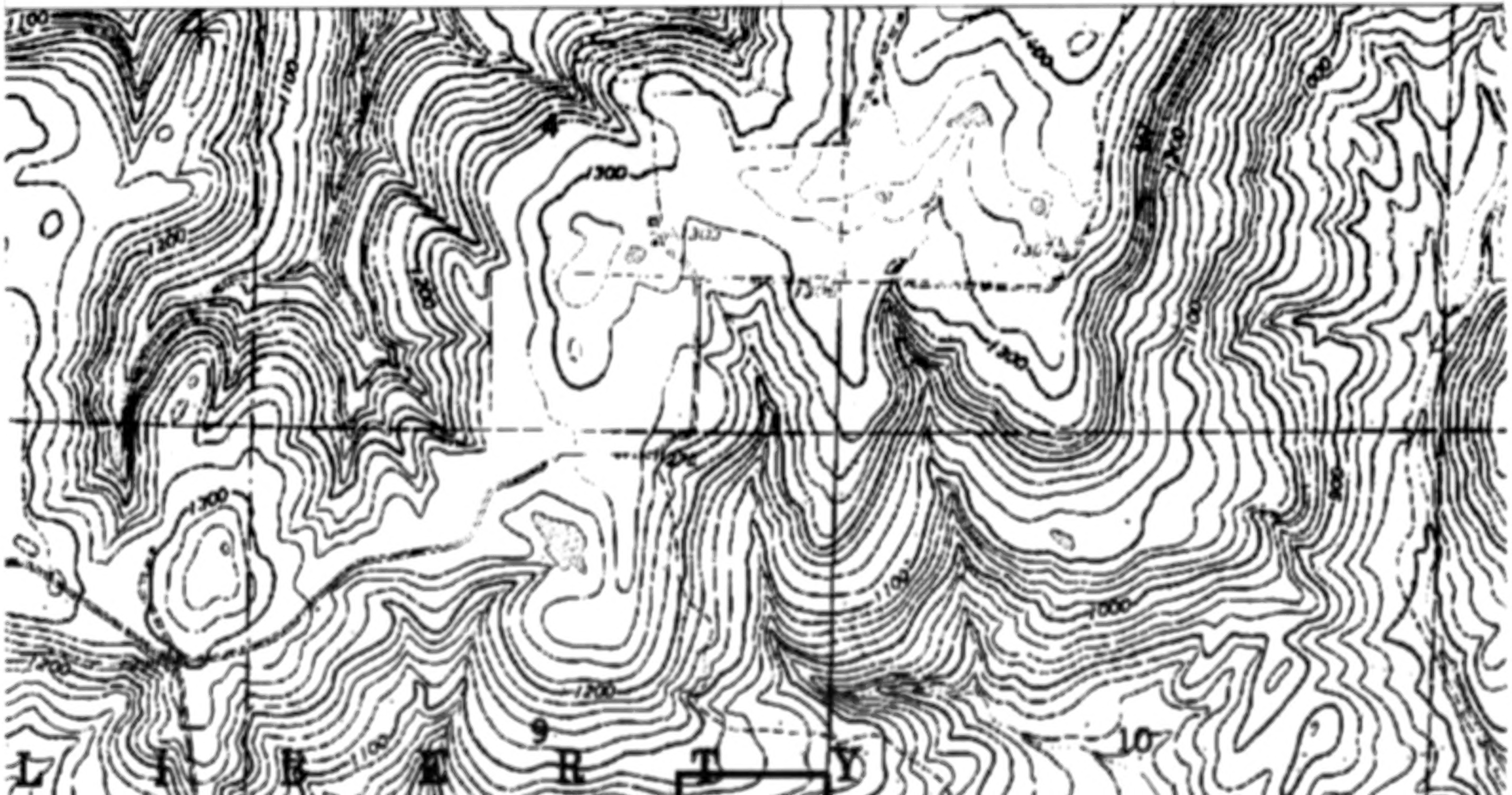
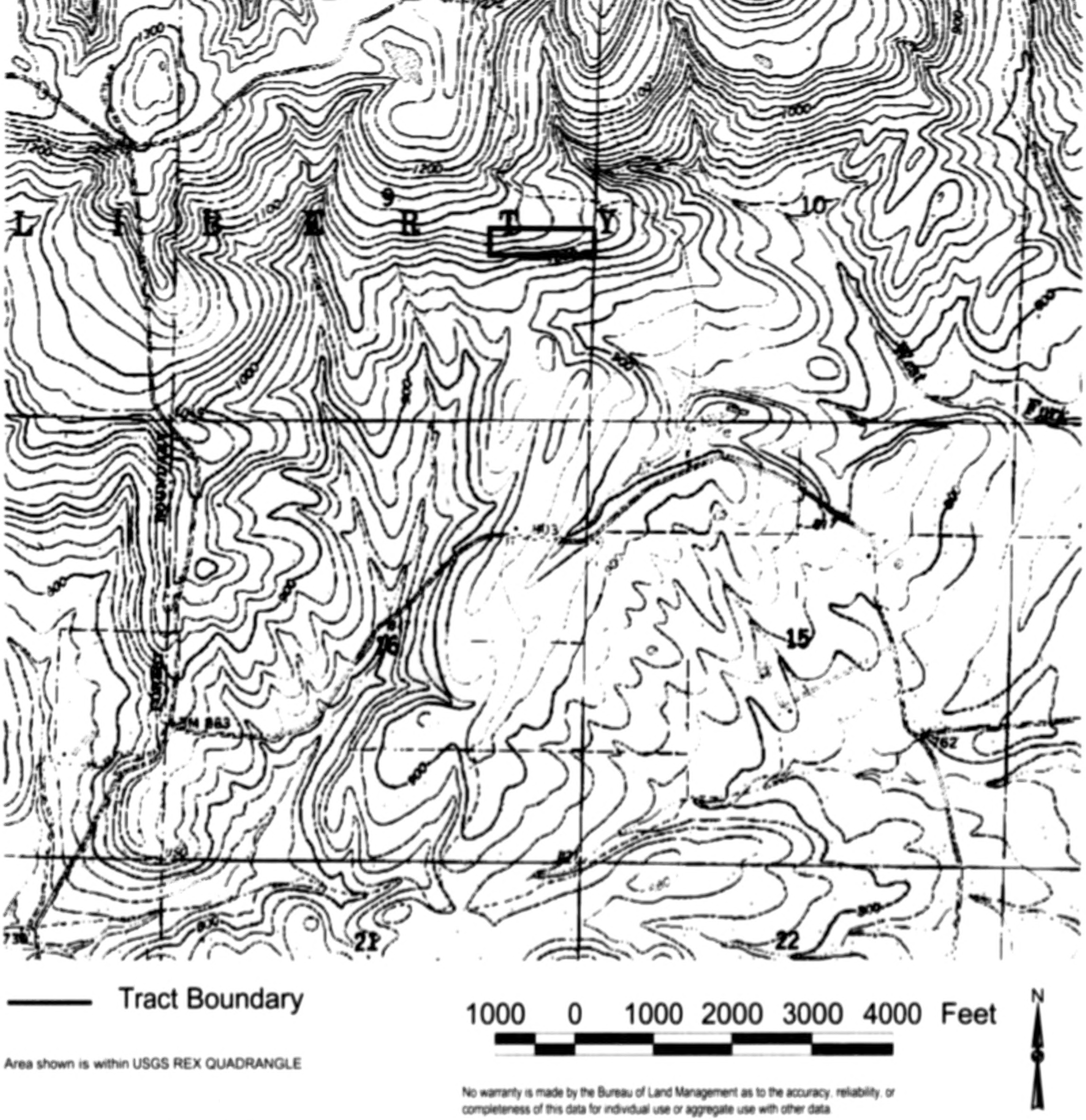
Van Buren County, Arkansas

West Fork Tract





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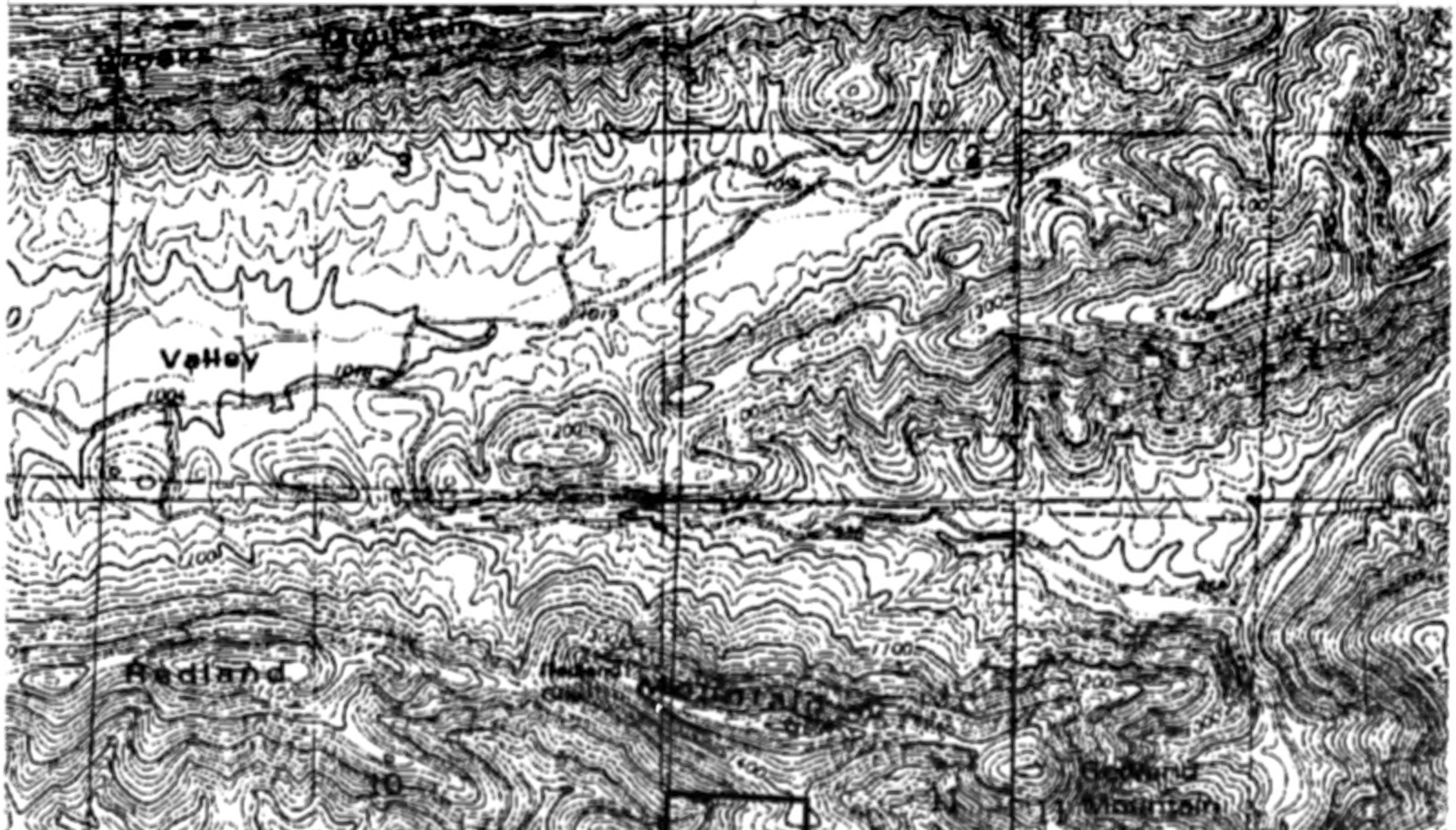
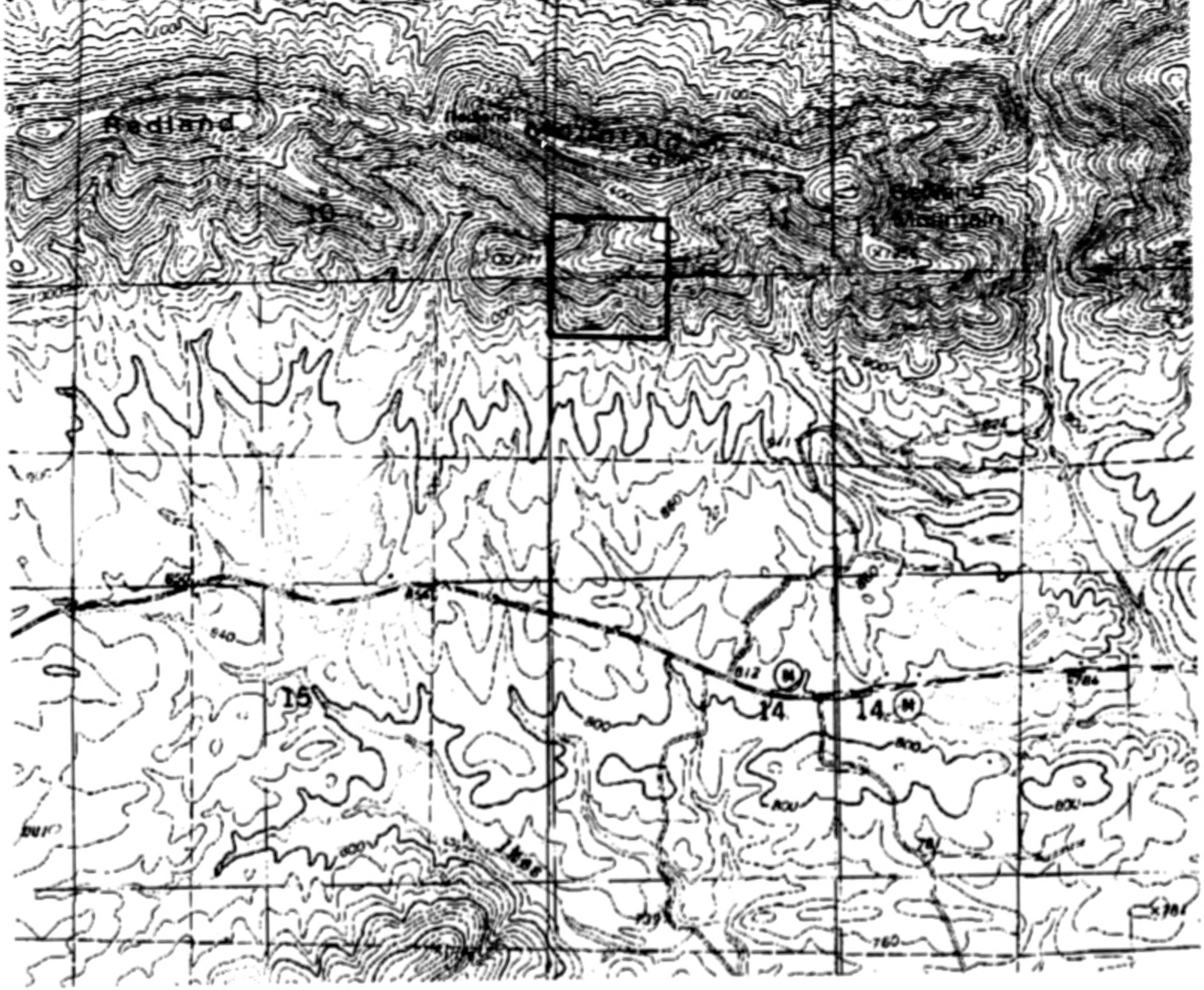
5th Principal Meridian
Pike County, Arkansas

Redland Mountain Tract





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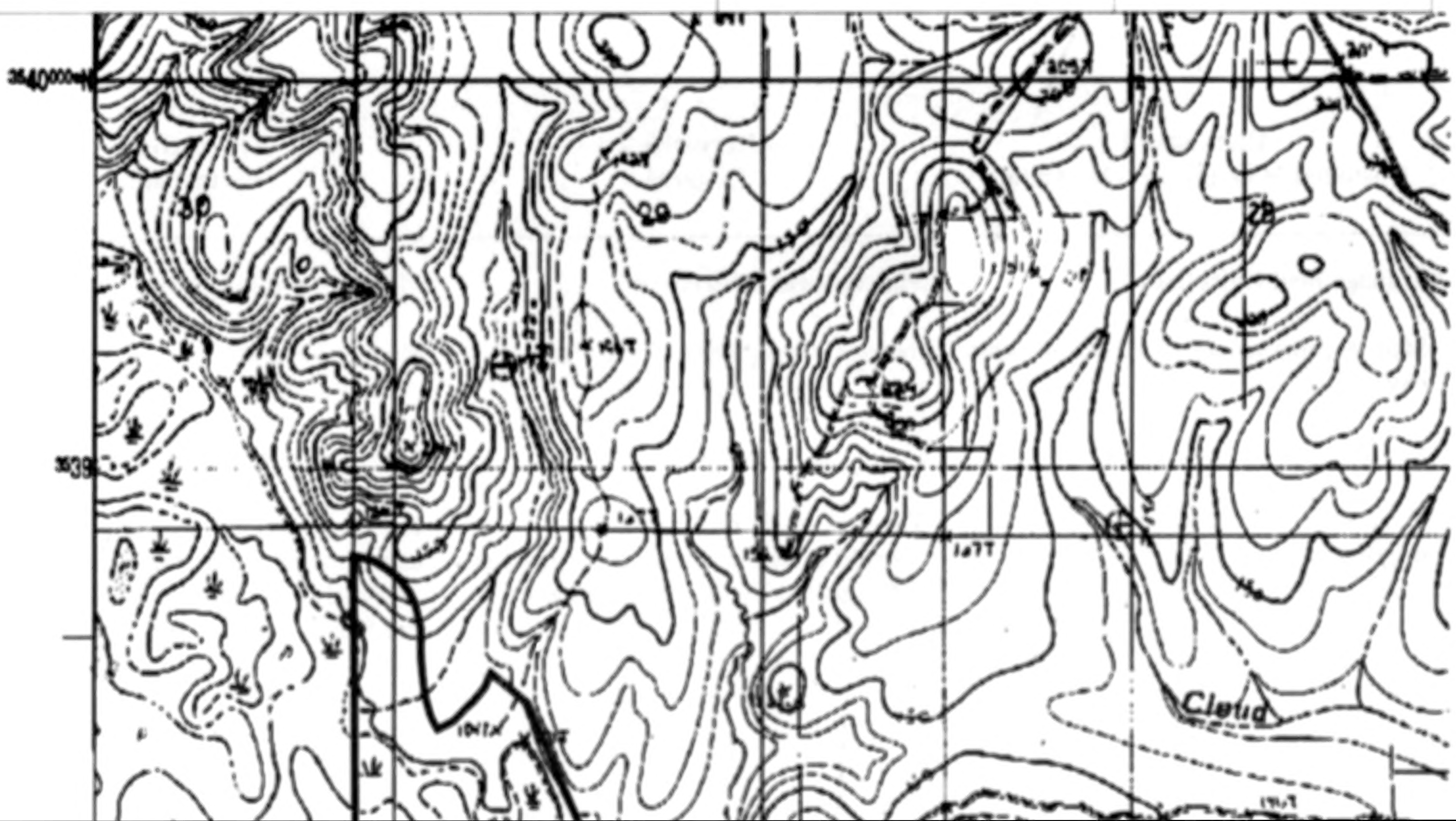
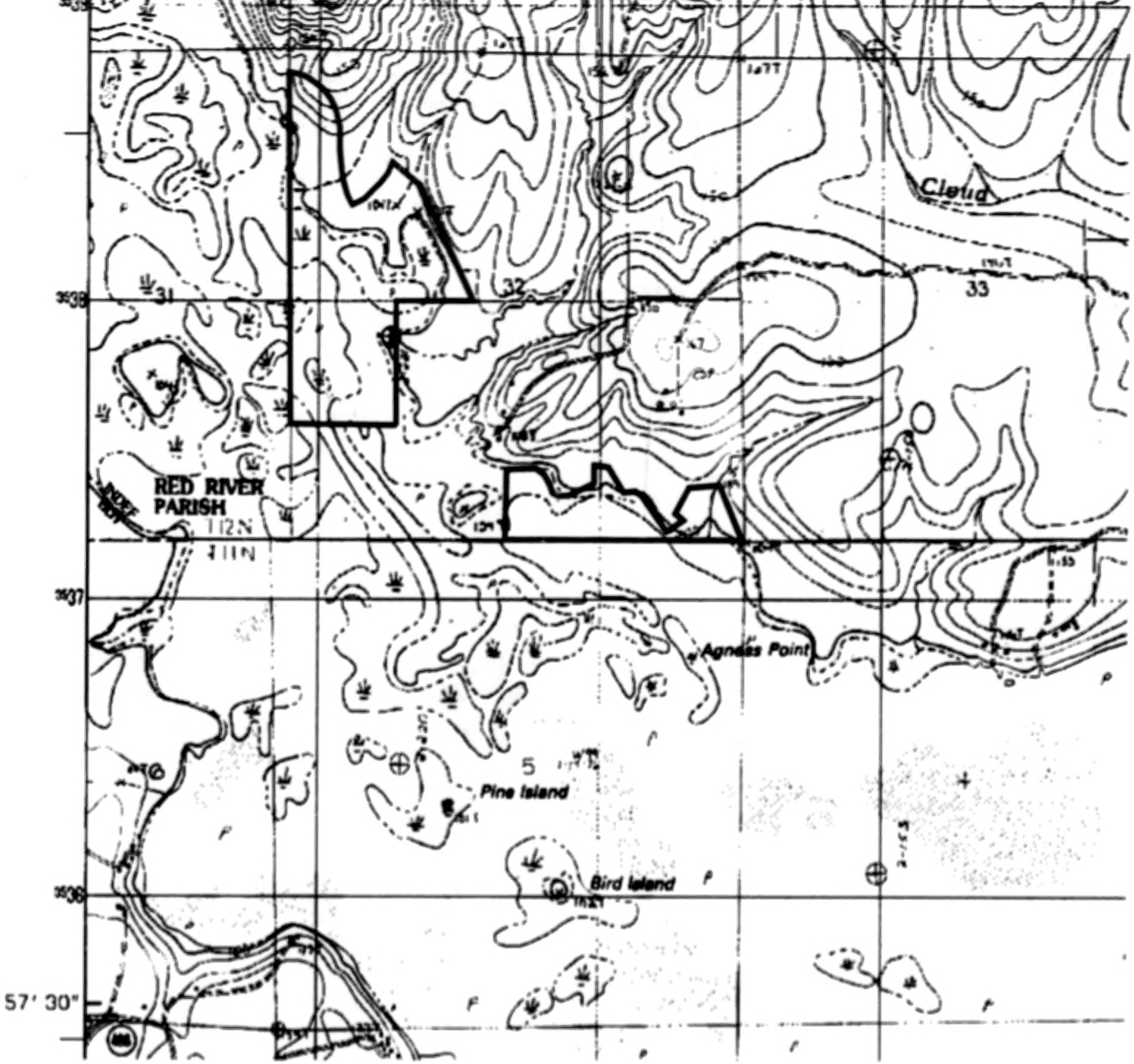
Natchitoches Parish, Louisiana

Black Lake Tract





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1000 0 1000 2000 3000 4000 Feet

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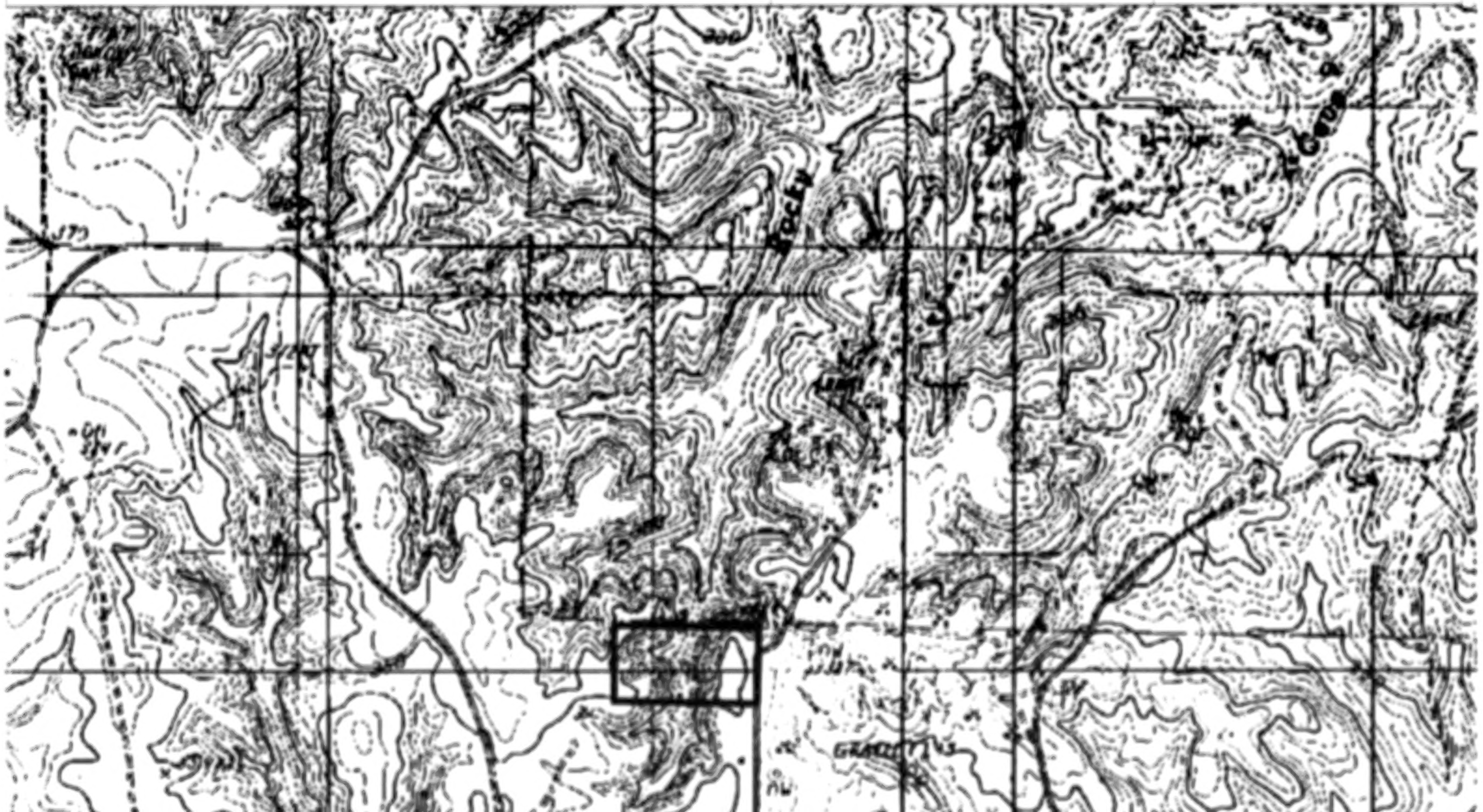
Louisiana Meridian
DeSoto Parish, Louisiana

Rocky Bayou Tract



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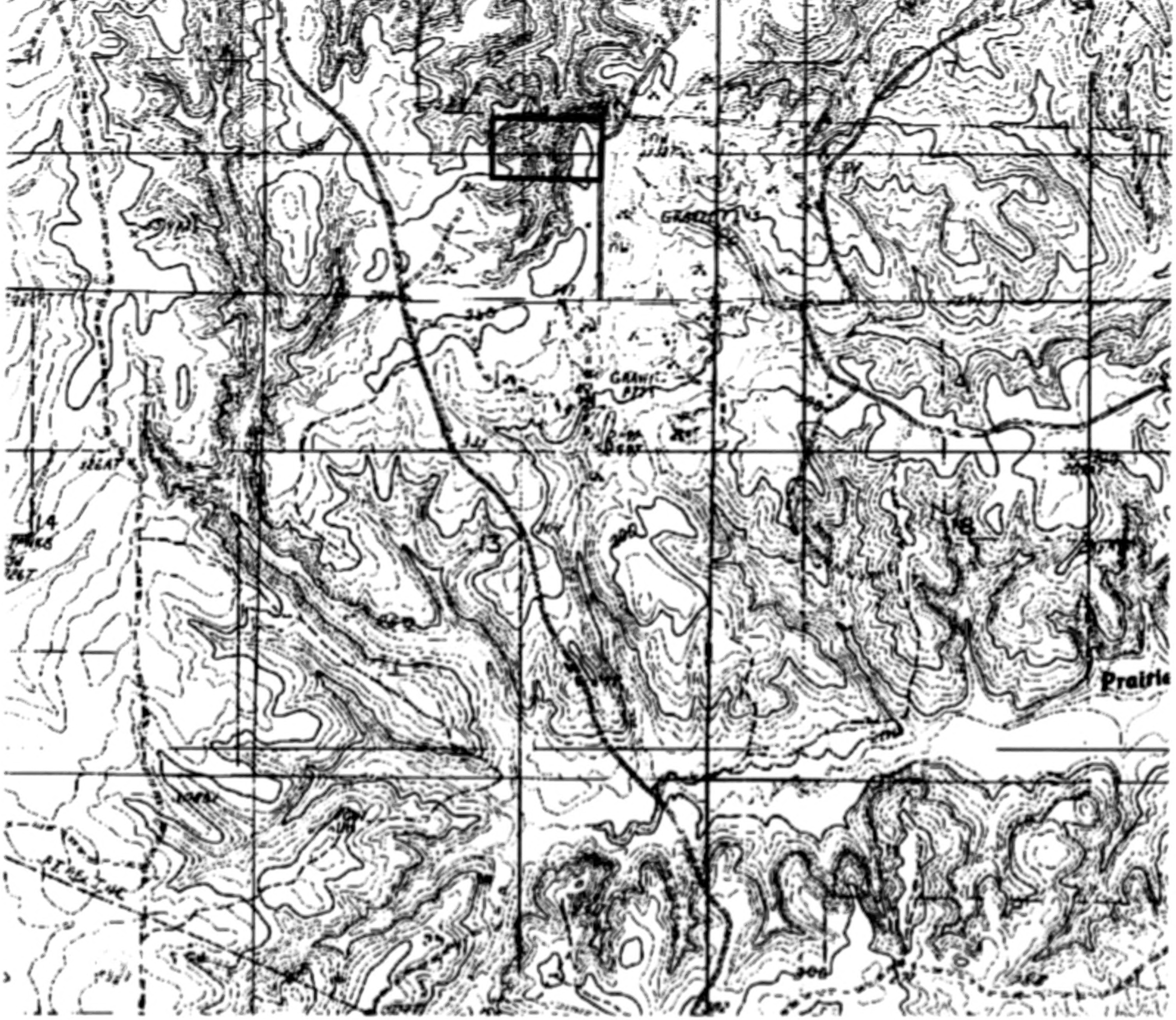
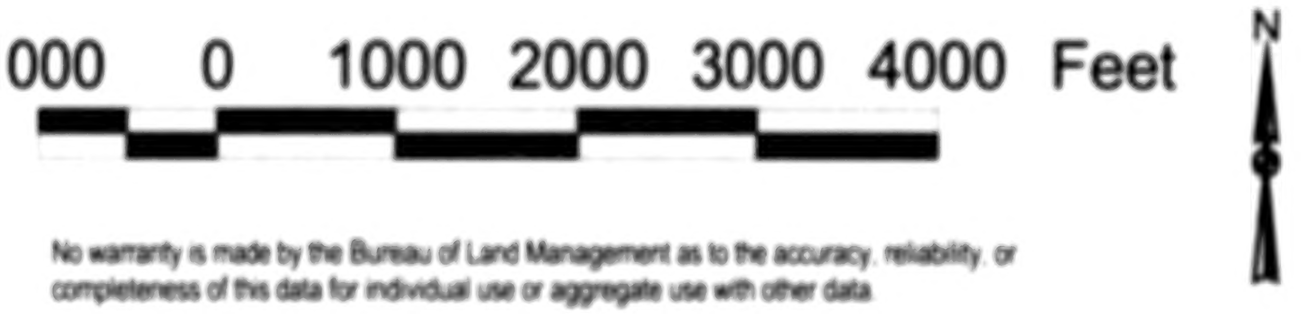


Tract Boundary



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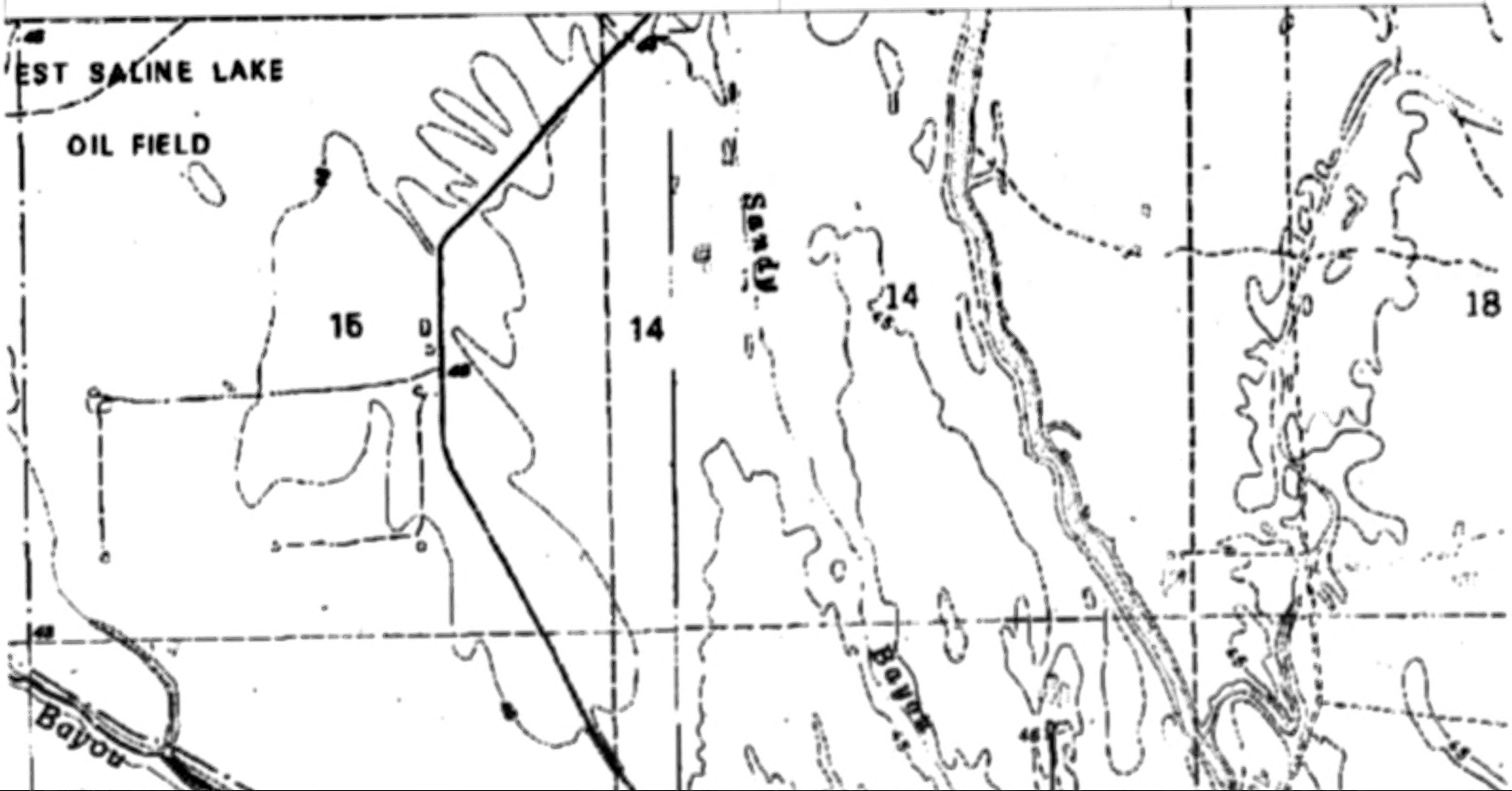
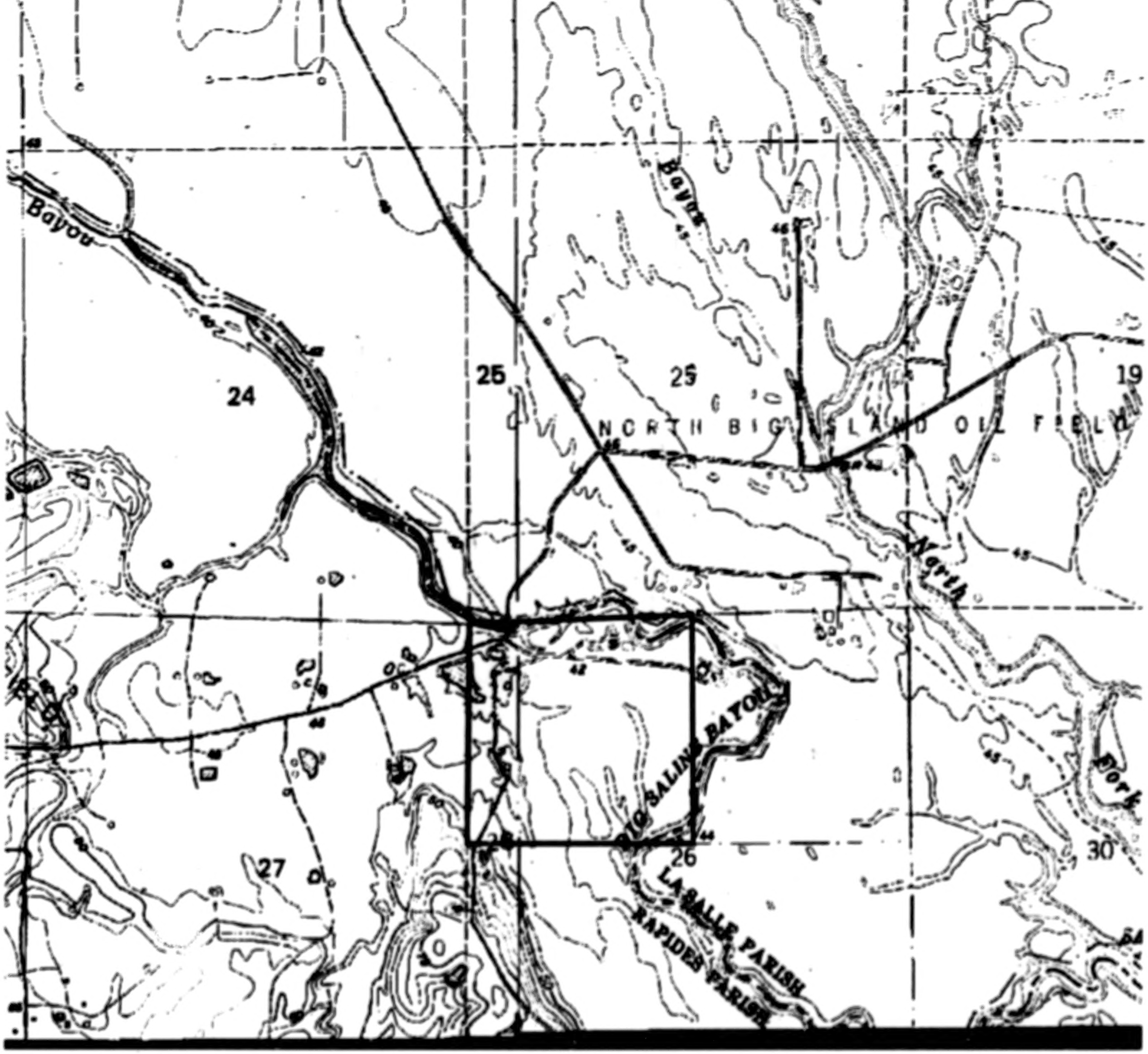
Louisiana Meridian
Rapides Parish, Louisiana

Big Saline Bayou Tract





Tract Boundary

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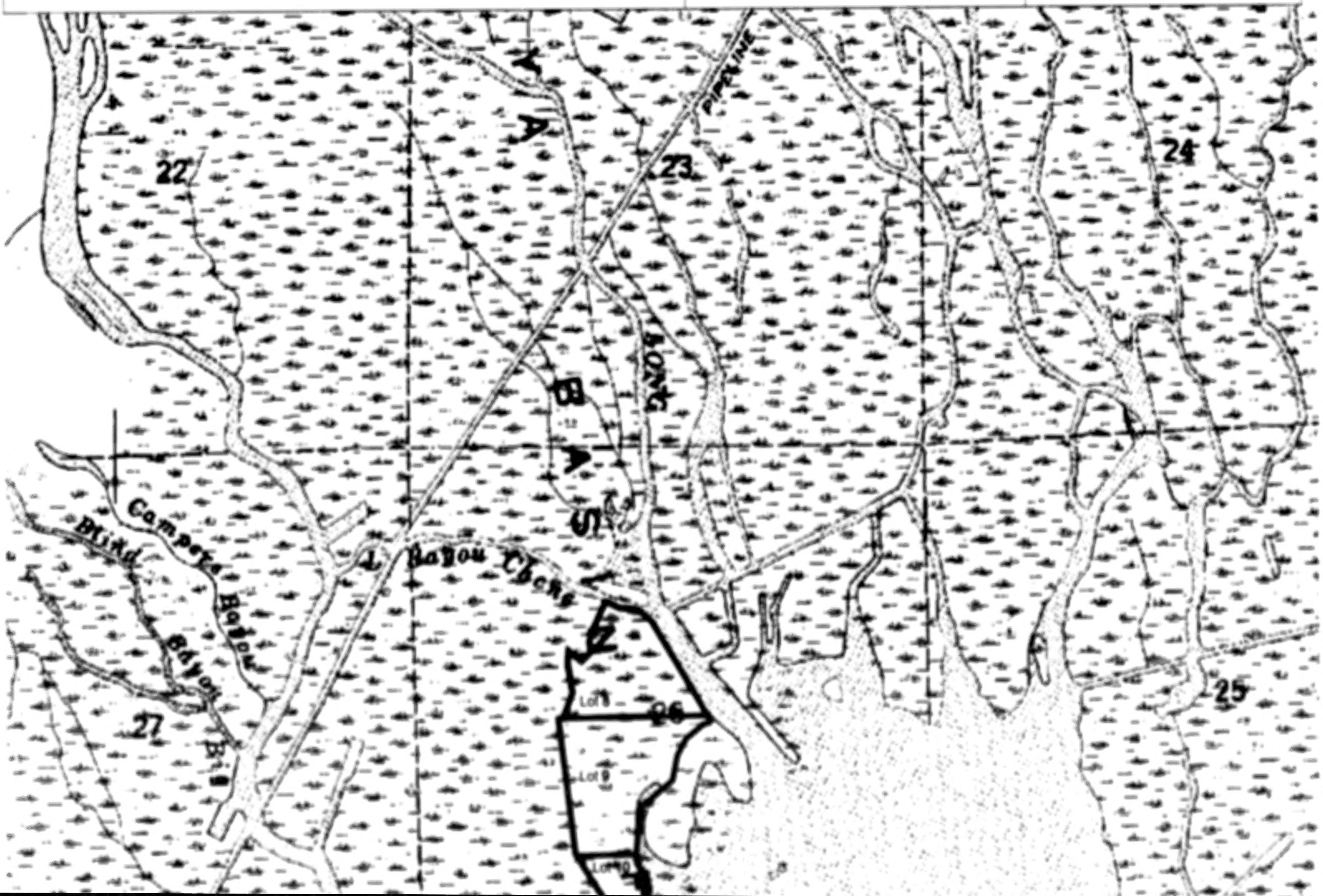
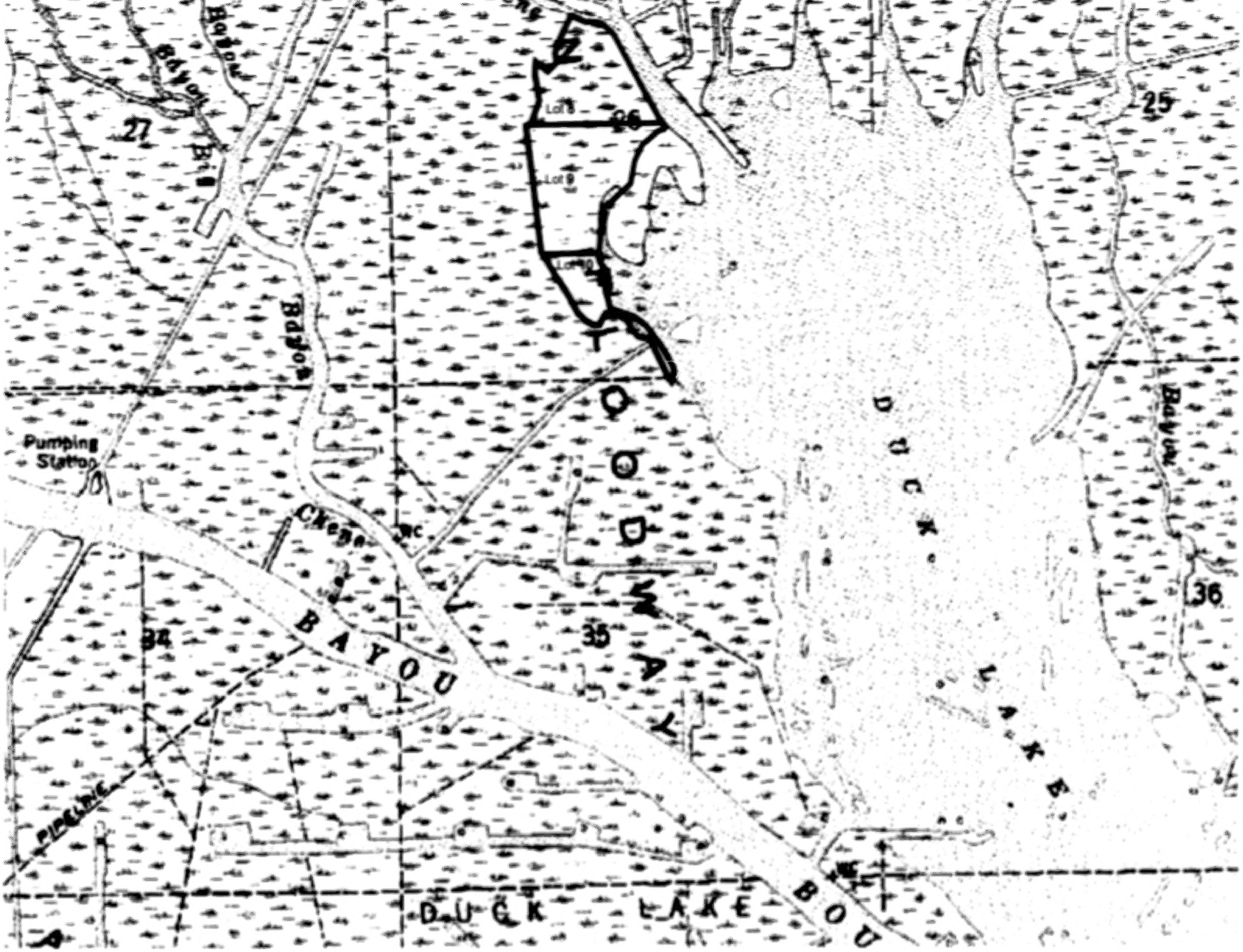
Lots 8,9, and 10,
Louisiana Meridian
St. Martin Parish, Louisiana

Duck Lake Tract





—— Tract Boundary

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